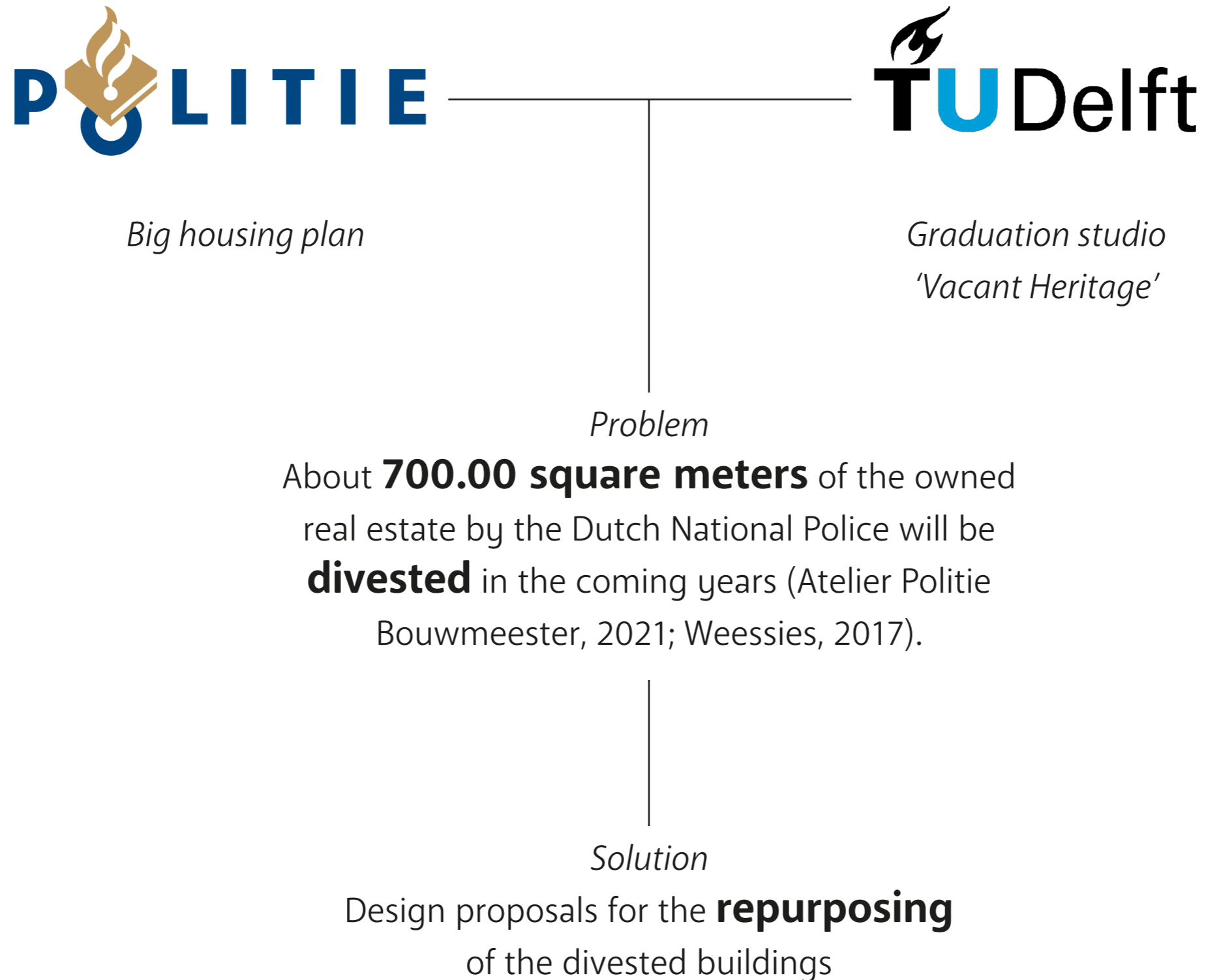




Havezate 't Velde

Experiencing the characteristics of a building typology

Noah van Asselt | 4644603 | 16-06-2022



POLICE REAL ESTATE





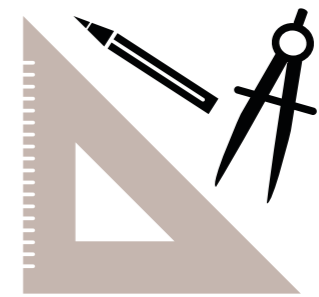
Group research



Building analysis



Individual research



Individual design



Den Haag (Photo: Michail Mexis)



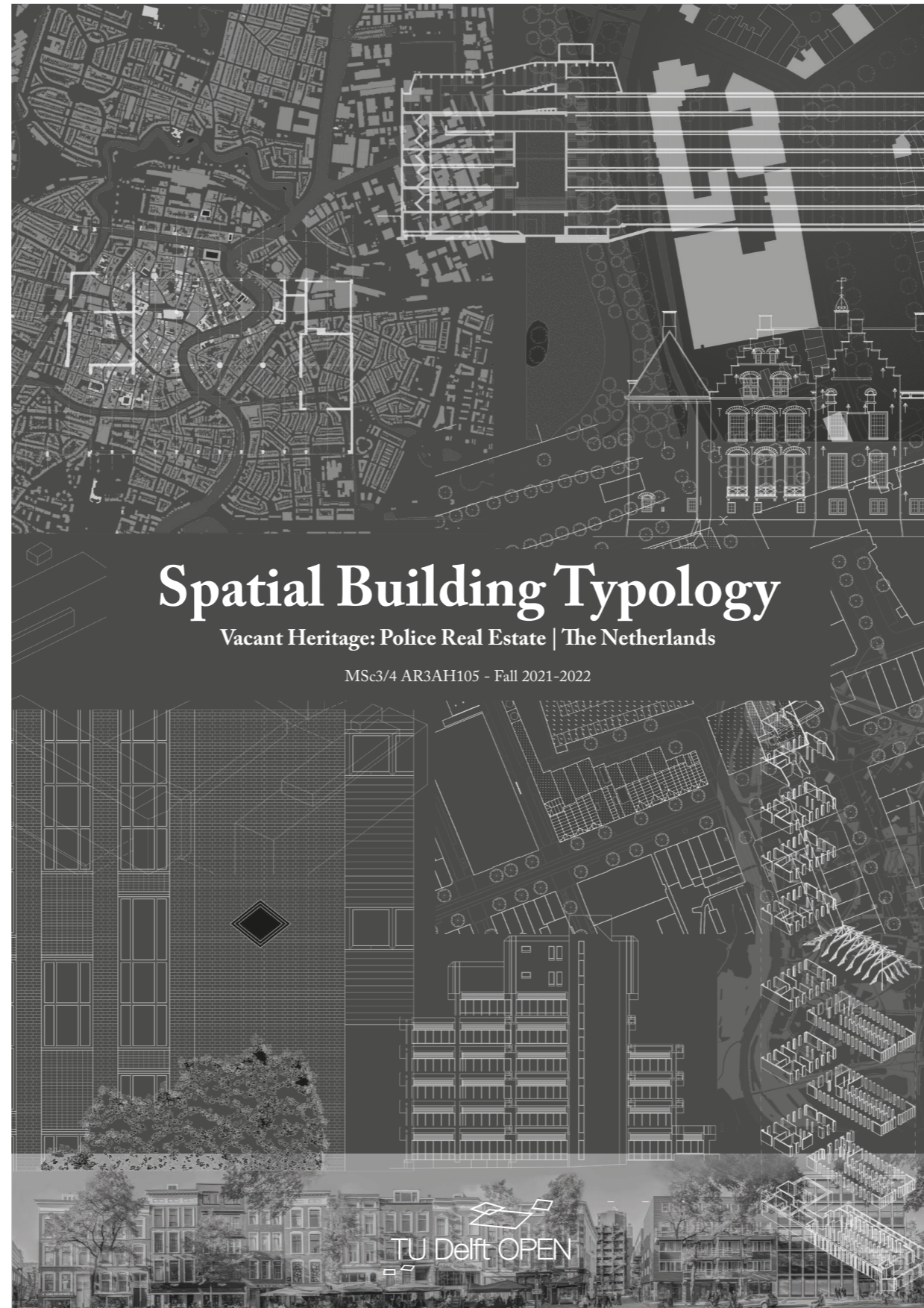
Rotterdam Witte de Withstraat (Photo: Aistė Mankutė)



Eindhoven (Photo: Lucca Fischer)



Middelburg (Photo: Robin Simons)



Haarlem (Photo: Tjeu de Gouw)



Rotterdam Haven (Photo: Tjeu de Gouw)



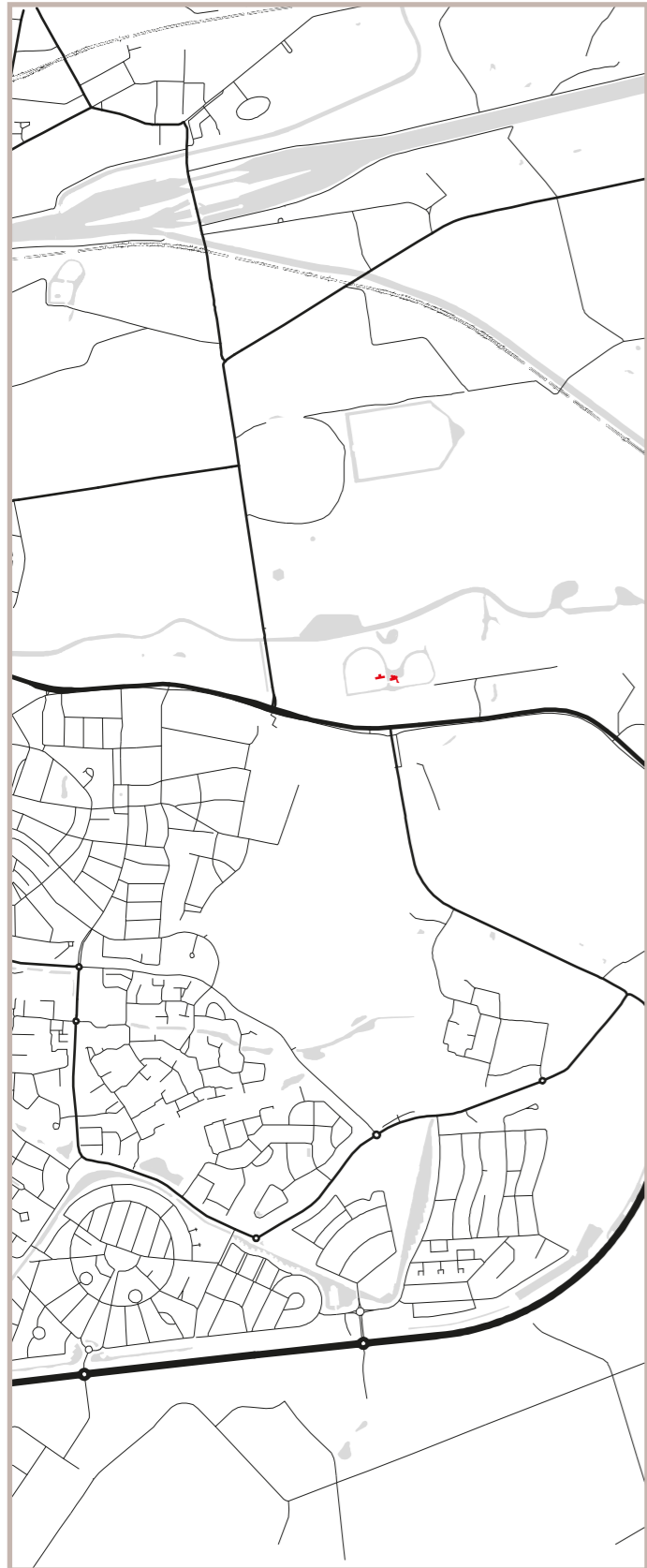
Groningen (Photo: Aistė Rakauskaitė)



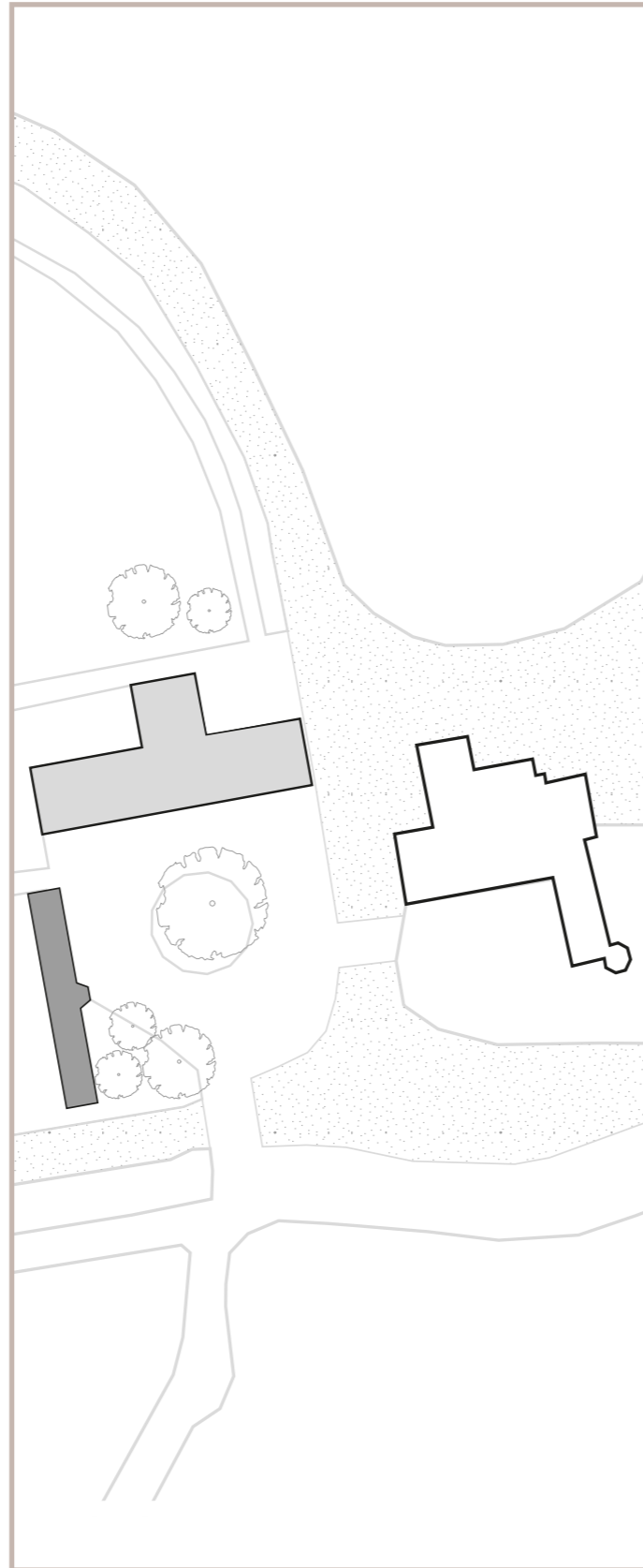
Warnsveld (Photo: Noah van Asselt)



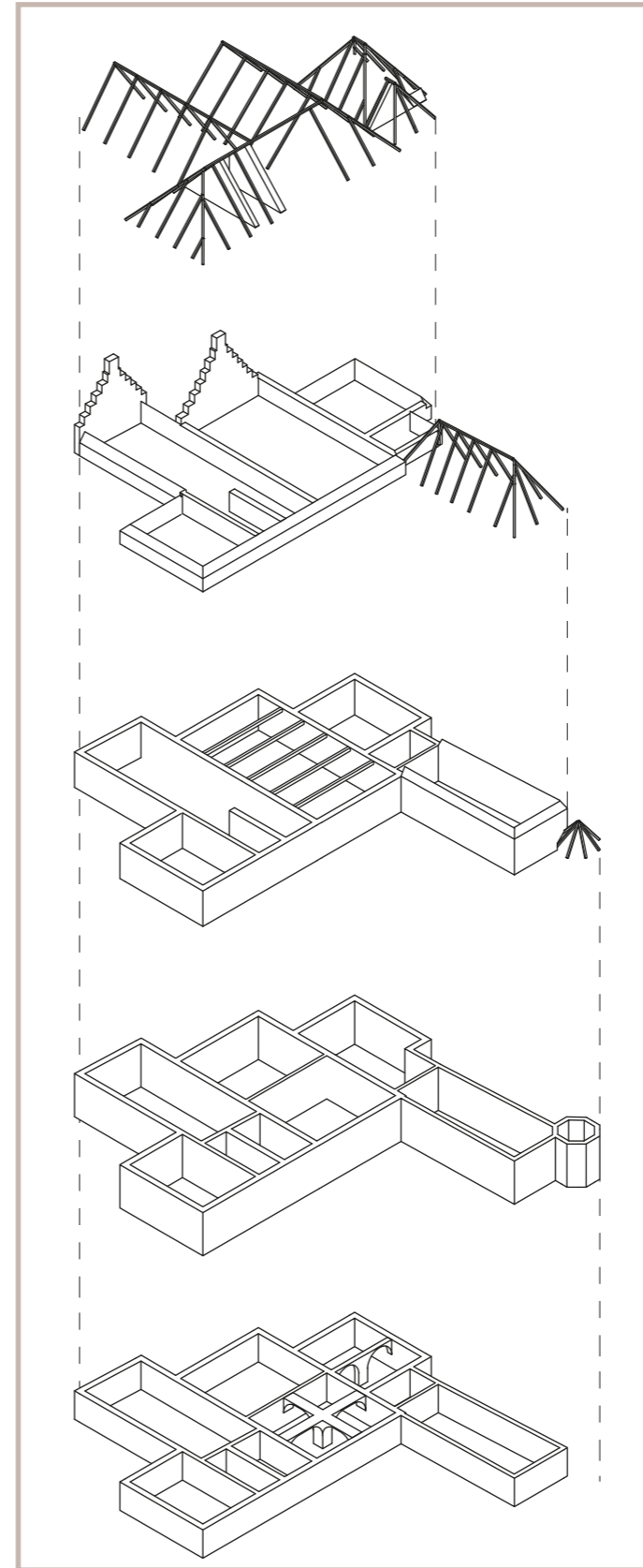
Inner city



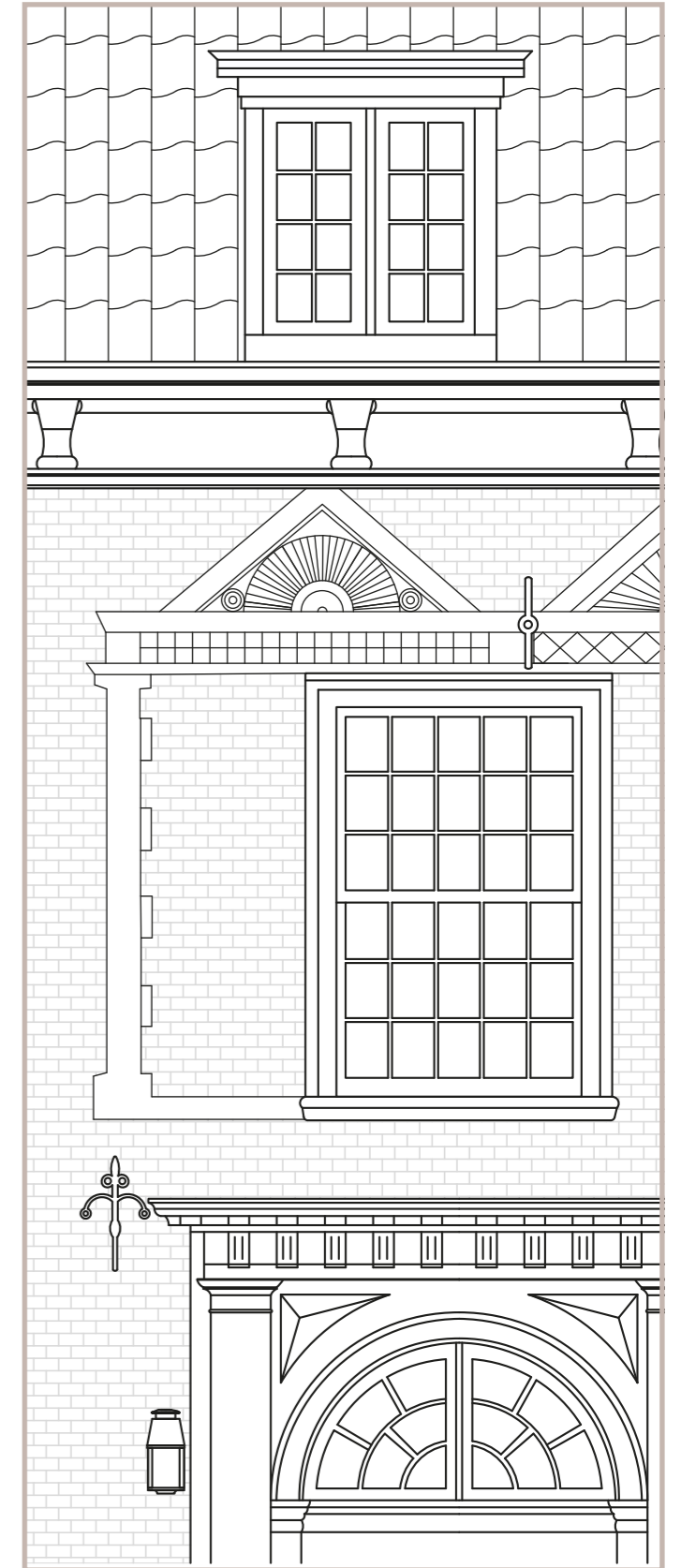
Urban block



Building object



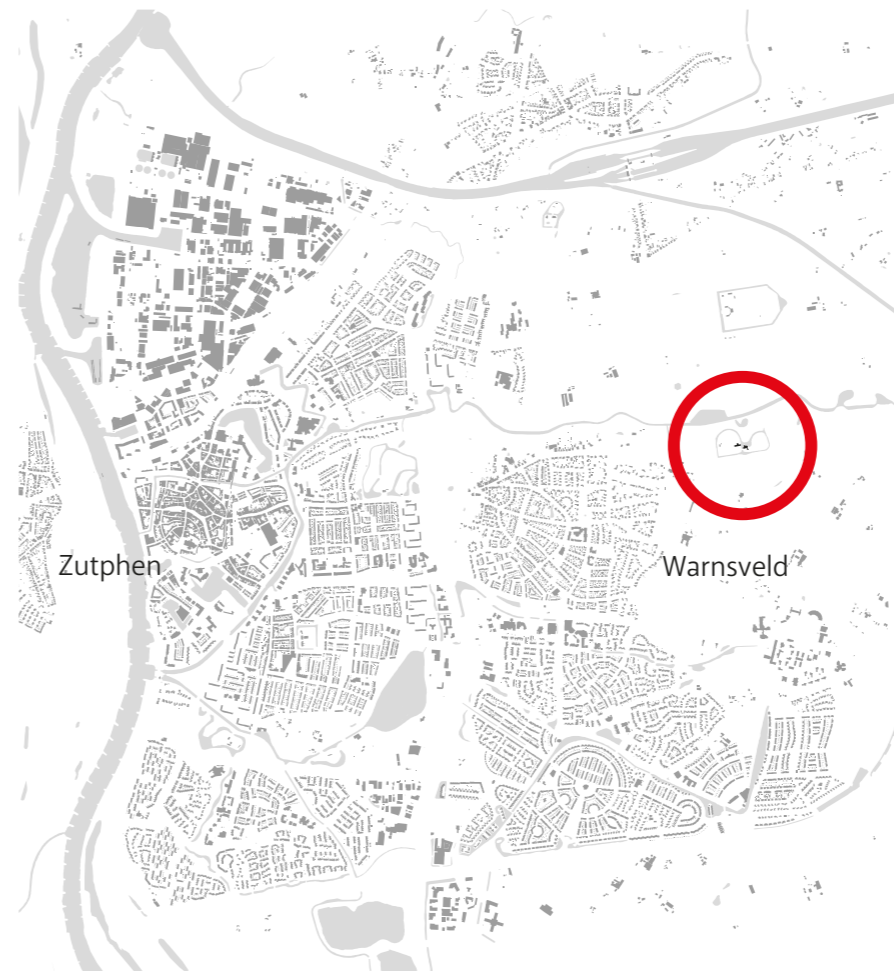
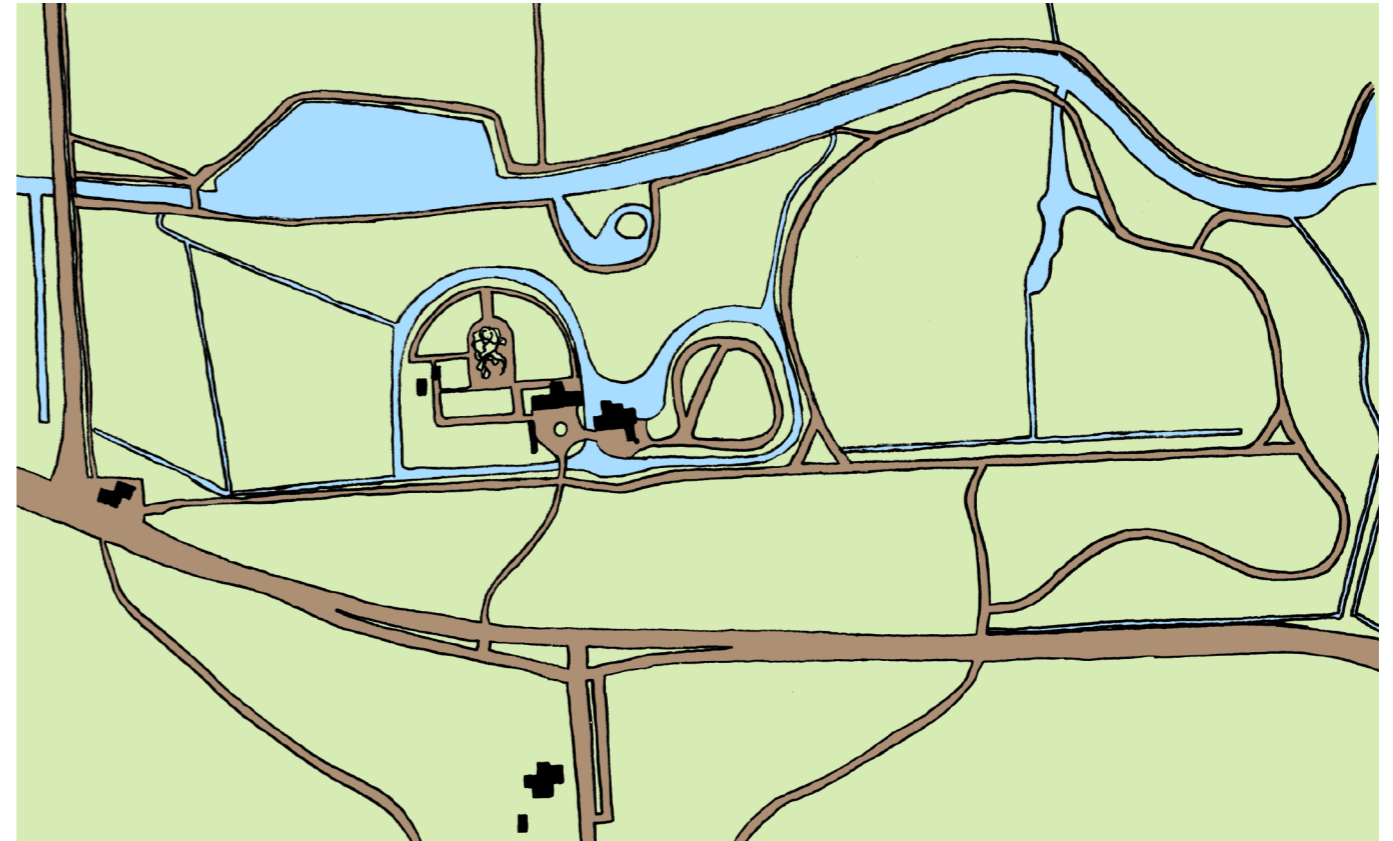
Building envelope



HUIS 'T VELDE



(Harenberg, 2001)



First mentioned
in 1326

Oldest remaining parts
from around 1550

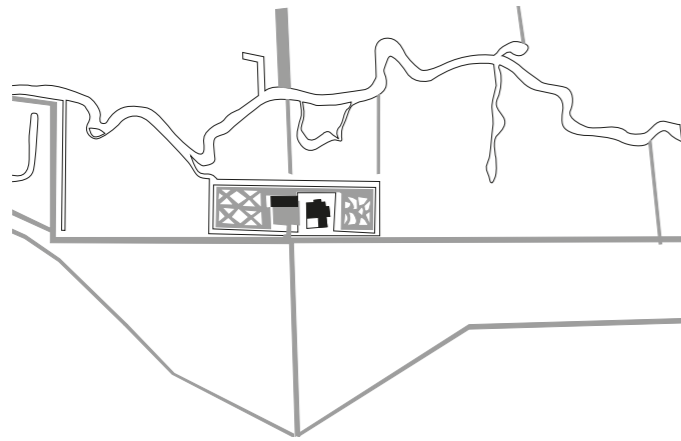
Estate
76 ha

Current function
police academy

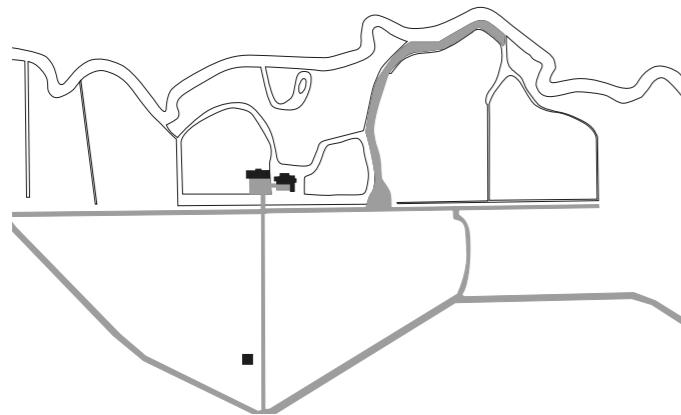
Buildings
main building,
coach house,
bird's house &
side buildings



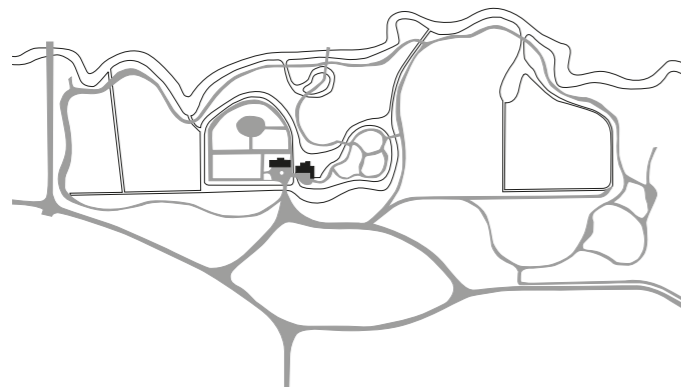
ANALYSIS



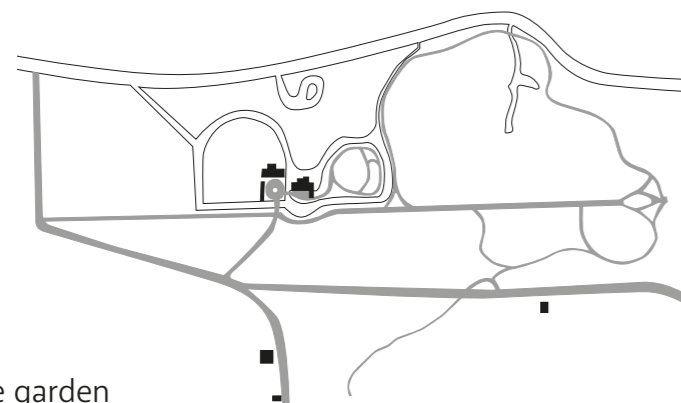
1778
Formal garden



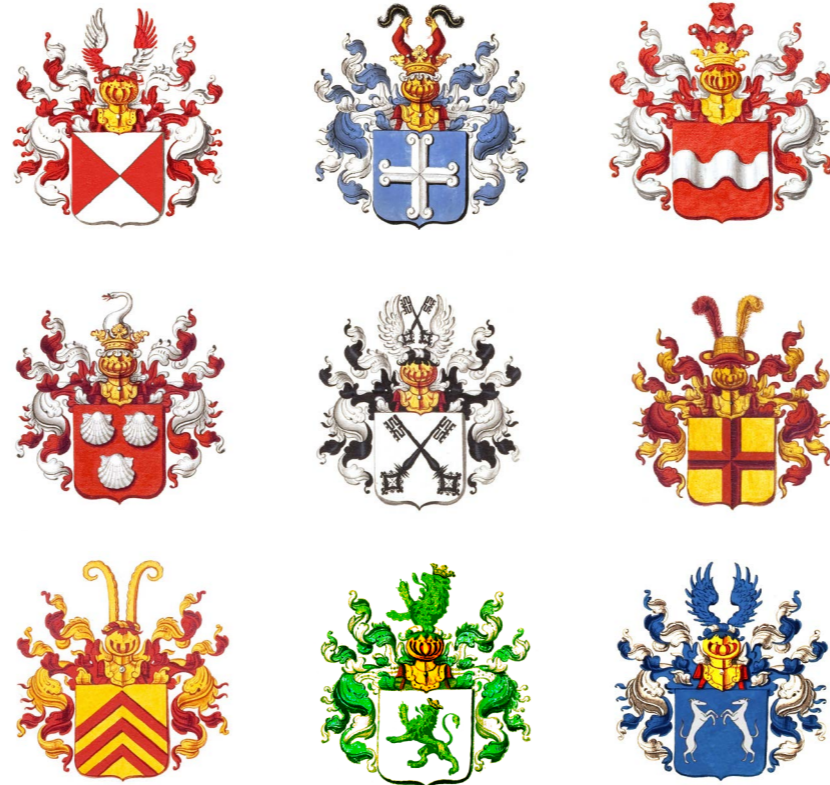
1810
First phase landscape garden



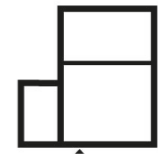
1824
Design landscape garden



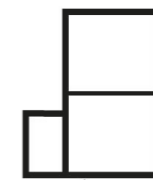
1897
Landscape garden



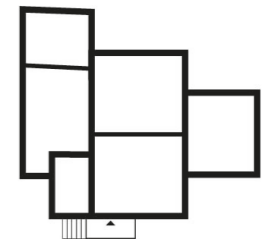
Phase 1
14th century



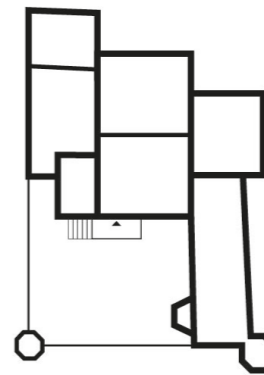
Phase 2
15th century



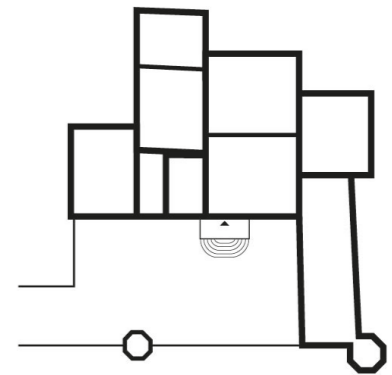
Phase 3
16th century



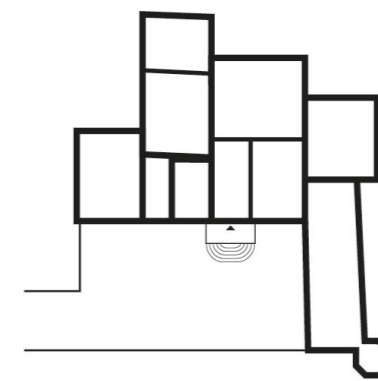
Phase 4
17th century



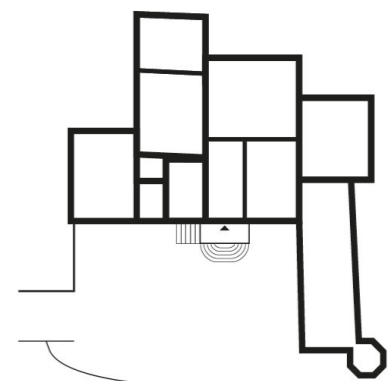
Phase 5
17th century



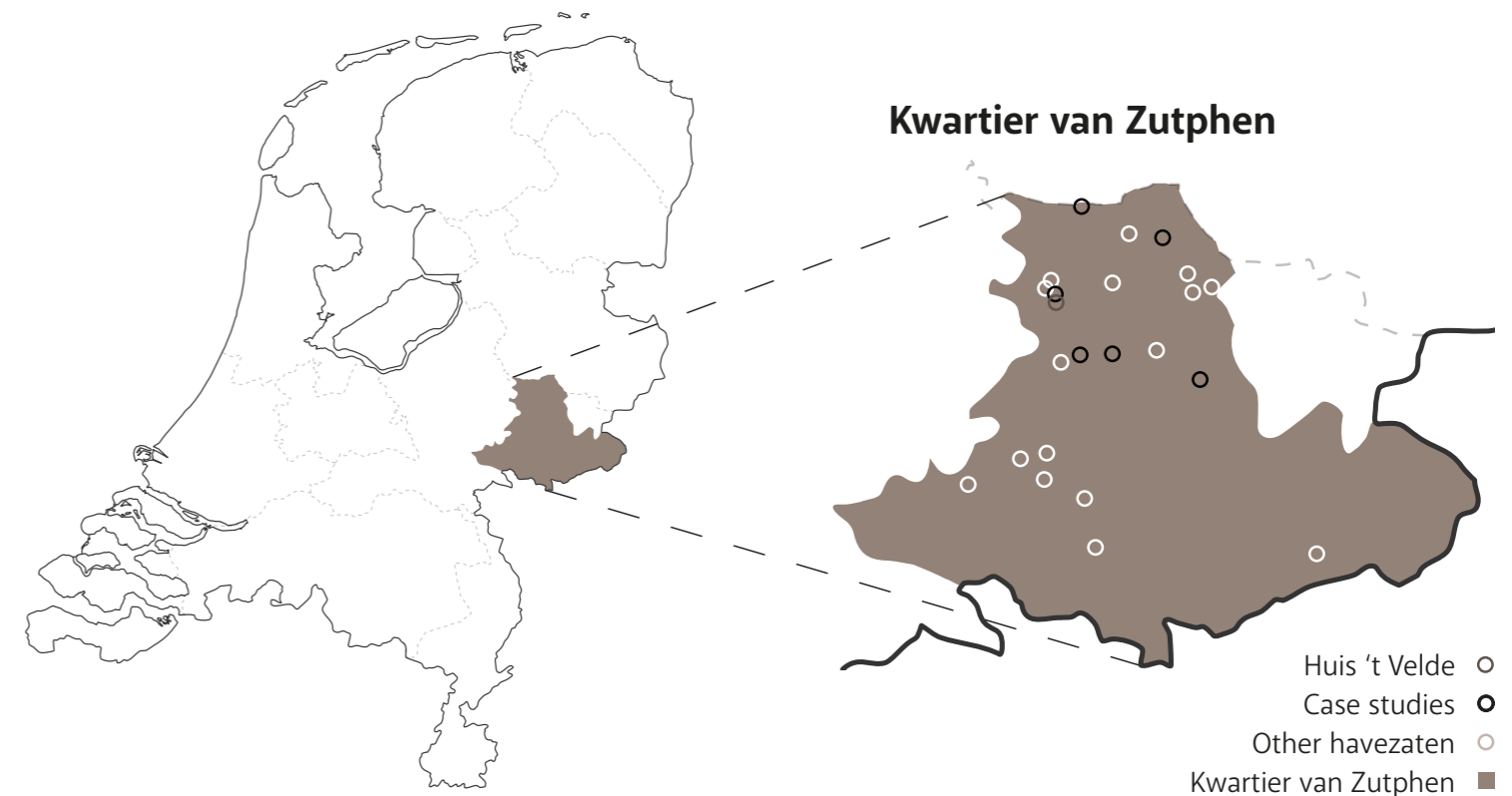
Phase 6
±1700



Phase 7
±1824



Phase 8
20th century



23 (partially) intact buildings of the 36 acknowledged havezaten from Het Kwartier van Zutphen

Hertogdom Gelre (Historisch Genootschap Lochem, n.d.)

“a **fortified house**, homestead,
manor or farm”

“a large **home with land**”

“In time, a **distinction** was made
between gentleman’s homestead and
the peasant homestead, the havezathen
(i.e. **the knightly estate**) and the
ordinary homestead”

“In Het Kwartier van Zutphen it also had to be
of certain size and **defensible**, which mostly
resulted in a **moated building**”

Havezate

“it became a **knightly property** in the
seventeenth century”

“A knightly estate in the east of the Netherlands,
to which **political rights** were attached”

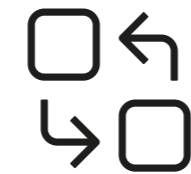
“a noble house was generally considered a
havezate, which made it possible for nobles to
be admitted to **knighthood** faster”



Preservation is often linked with economic considerations



Revenue models to cover high costs



Changes to the building, estate and its use



Loss of cultural-historic values and specific characteristics of the typology



Research into the building typology is necessary to **identify the characteristics**

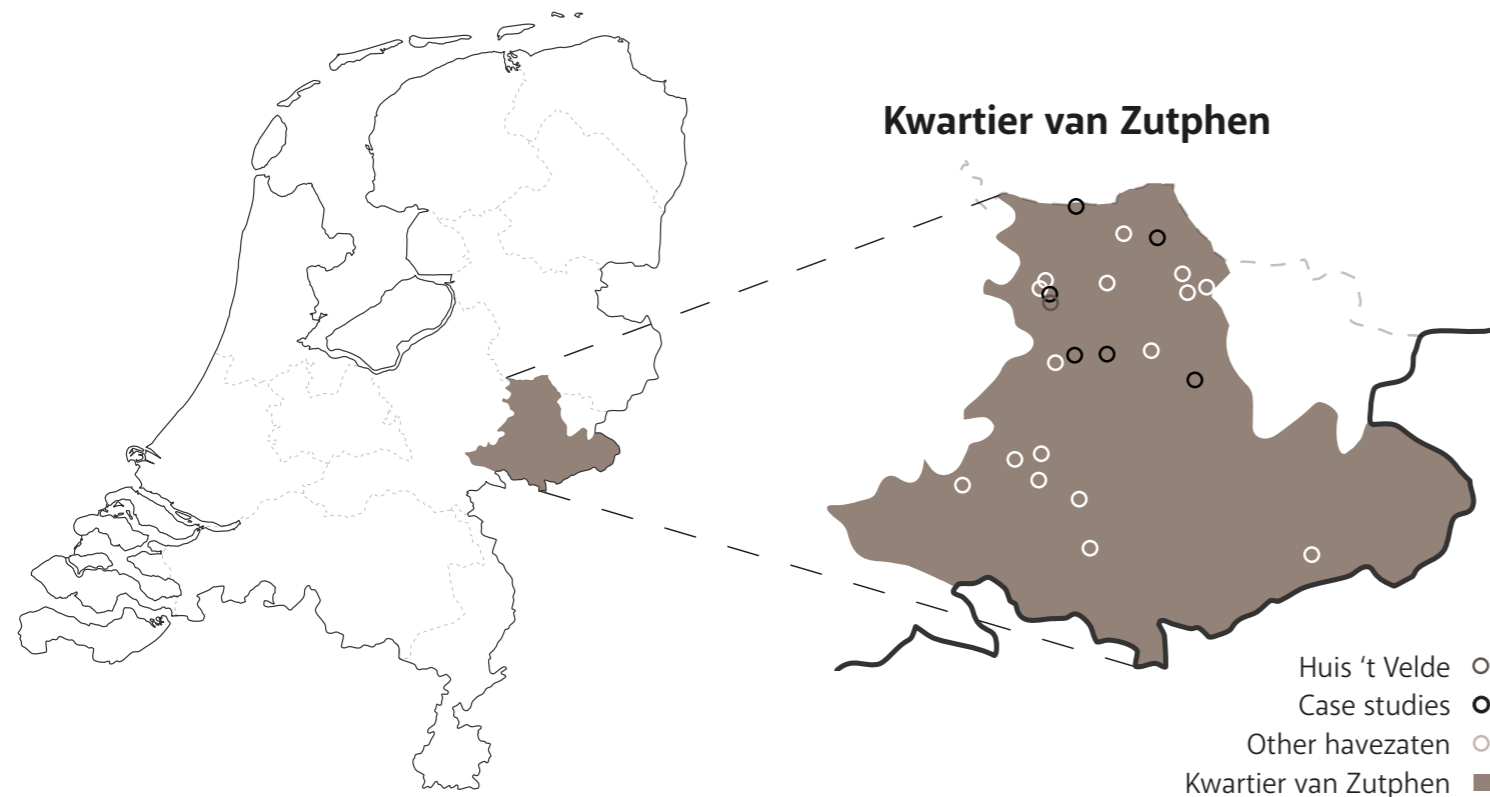


Design toolbox to make the building typology experienceable

How can fourteenth-century **havezaten from Het Kwartier van Zutphen be characterized to formulate a **building typology** and how can this be made **experienceable** to the public in the re-design of **Huis 't Velde**?**

INDIVIDUAL RESEARCH





23 (partially) intact buildings of the 36 acknowledged havezaten from Het Kwartier van Zutphen



Huis 't Velde - Built around 1326
(De Haen, 1726)

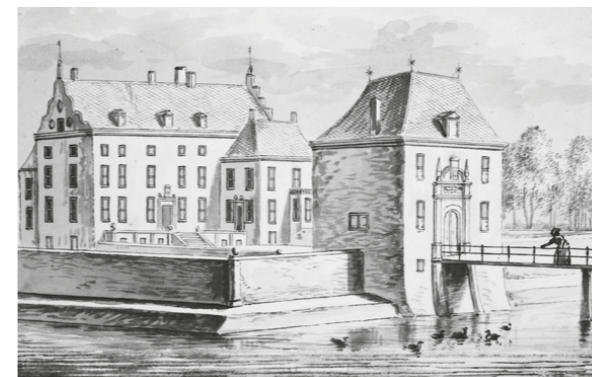
Fourteenth-century havezaten



Kasteel Vorden - Built around 1315
(Gouda Quint, 1891-1892)



Kasteel Ruurlo - Built around 1326
(Christ, Vieweg & Meurot, 1841b)



Huize Dorth - Built around 1329
(De Haen, 1735-1792)



Huis Verwolde - Built around 1346
(Gouda Quint, 1893-1900)



Kasteel Hackfort - Built around 1370
(Christ, Vieweg & Meurot, 1841a)



Huis de Voorst - Built around 1378
(Unknown, 1823-1824)



Kasteel Ruurlo

Vordenseweg 2
7261 LZ Ruurlo
Municipality of Berkelland
Gelderland, the Netherlands



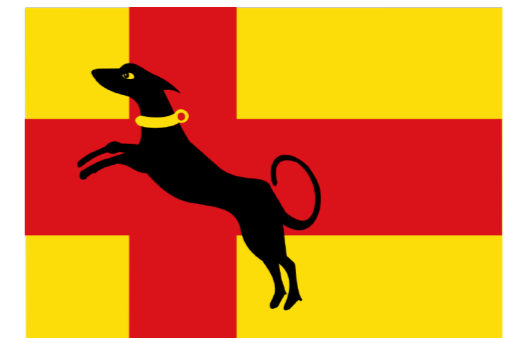
Roderloo



Van Heeckeren



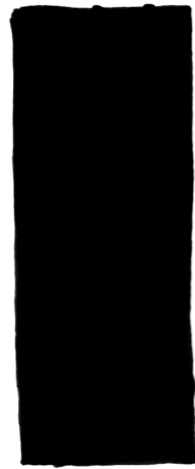
Schimmelpenninck van der Oye



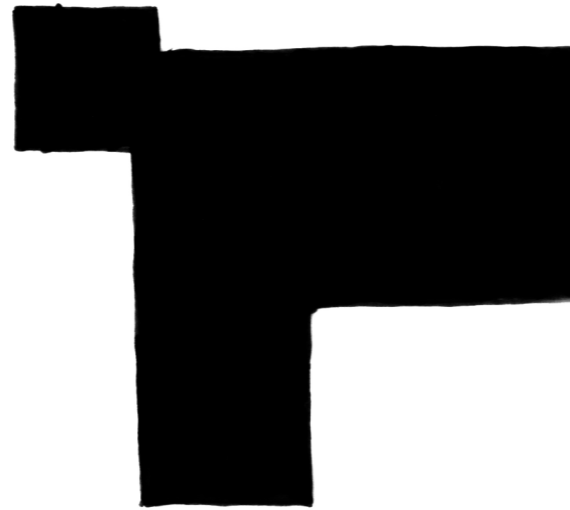
Ruurlo



HISTORIC BUILDING DEVELOPMENT



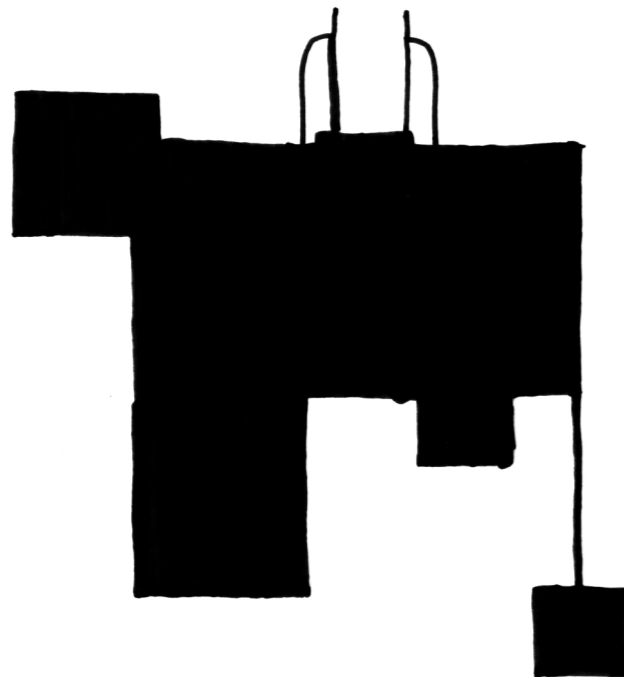
Phase 1
±1326



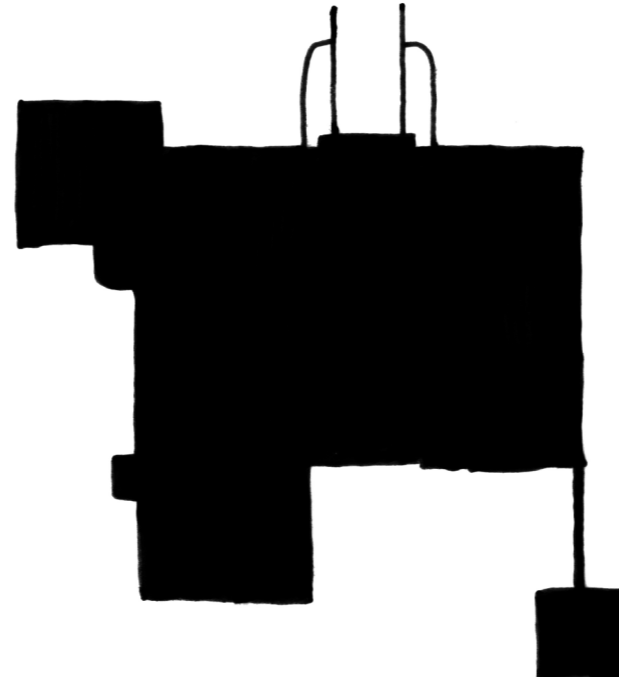
Phase 2
±1550



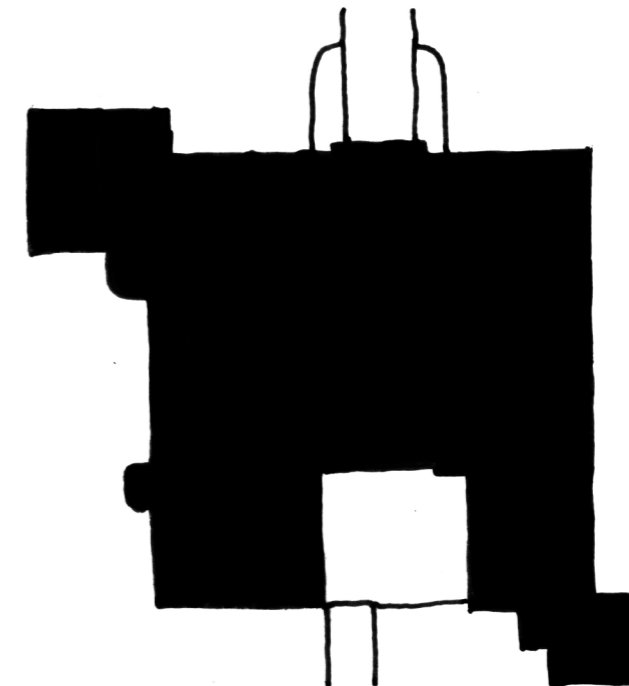
Phase 3
±1572



Phase 4
±1728

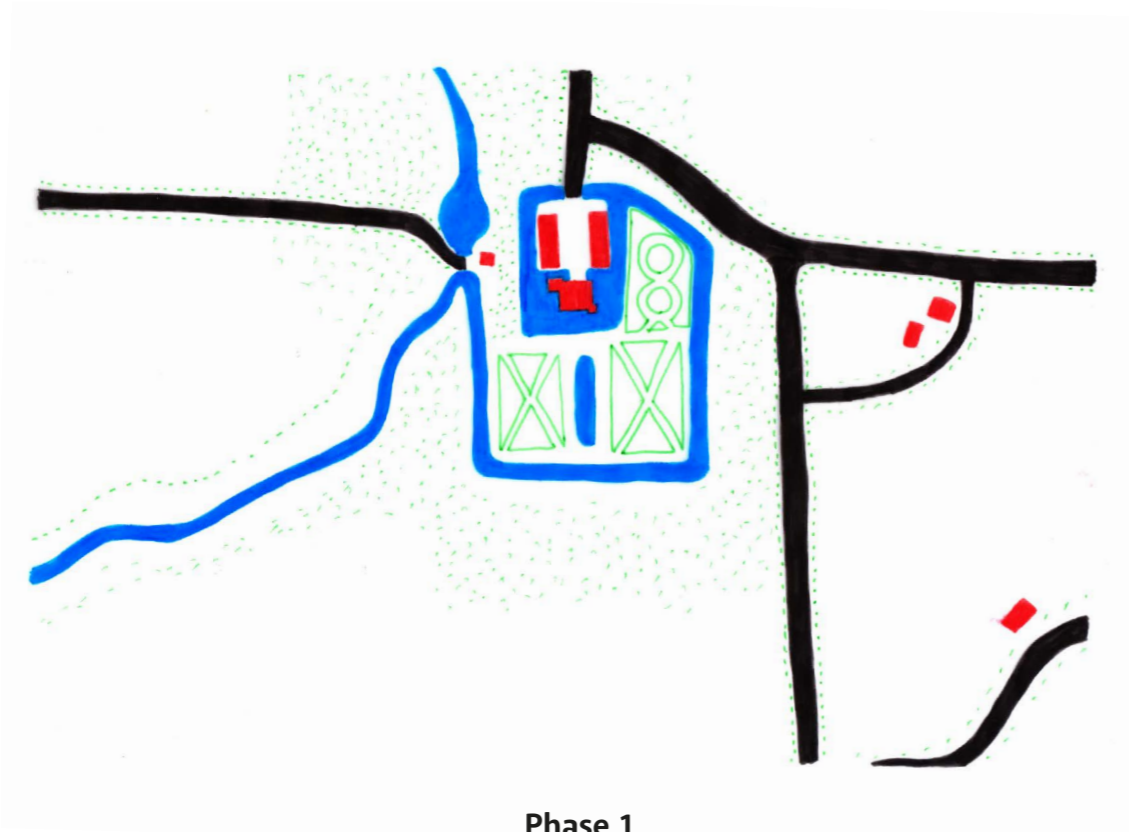


Phase 5
±1869

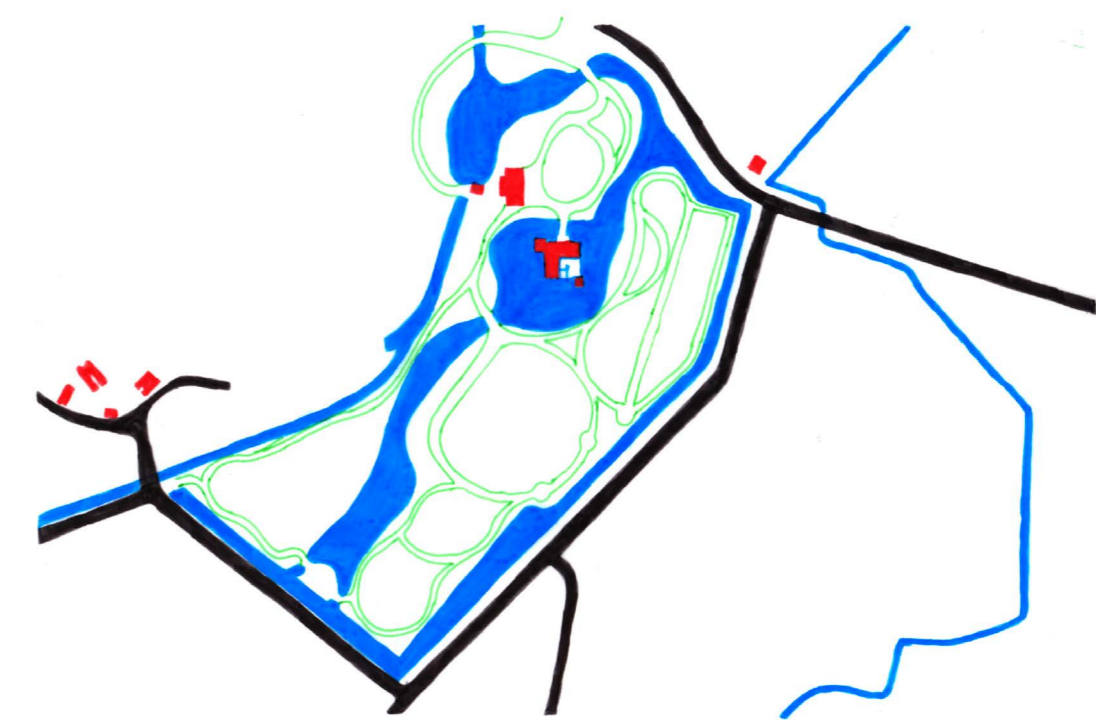


Phase 6
±1984

HISTORIC ESTATE DEVELOPMENT



Phase 1
±1780



Phase 2
±1801



Phase 3
±1880



Phase 4
±1984

EXTERIOR ANALYSIS



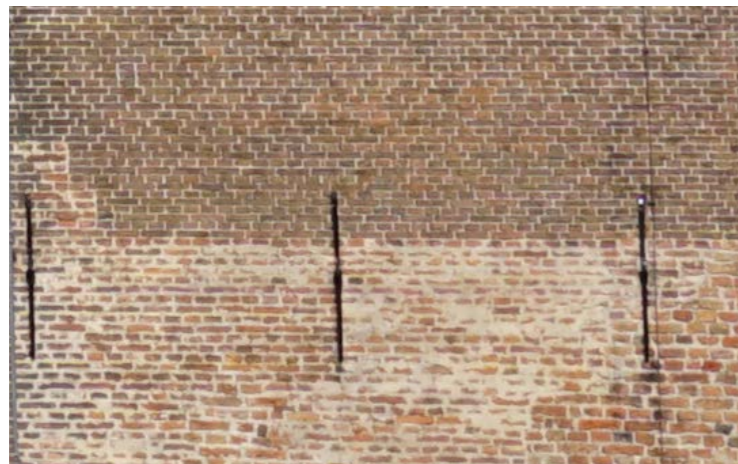
(Van Asselt, 2020)



(Gelders Archief / Gemeente Berkelland)



(Zaaijer, 2021)



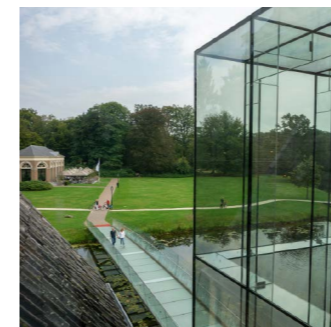
(Van Asselt, 2020)



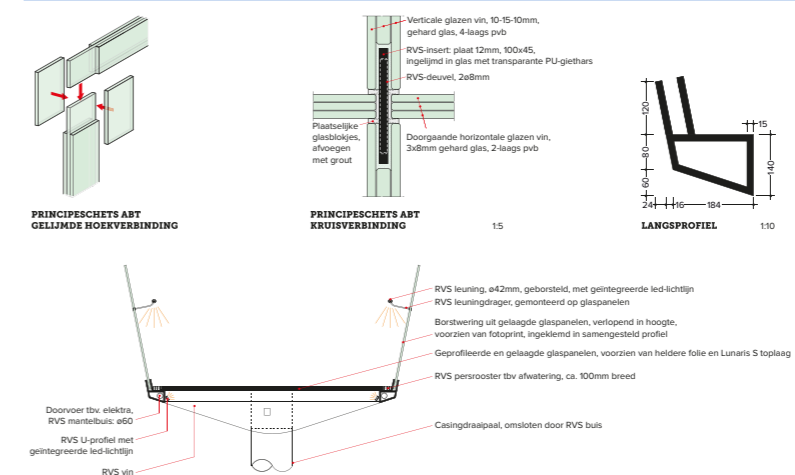
(Monuglas, n.d.)



(Van Asselt, 2020)



(Van Asselt, 2021)



(Wind & Van Oosten, 2017, p. 38)



(Van Asselt, 2020)



(Van Asselt, 2020)

INTERIOR ANALYSIS



(Oostendorp, n.d.)



(Gelders Archief/Gemeente Berkelland)



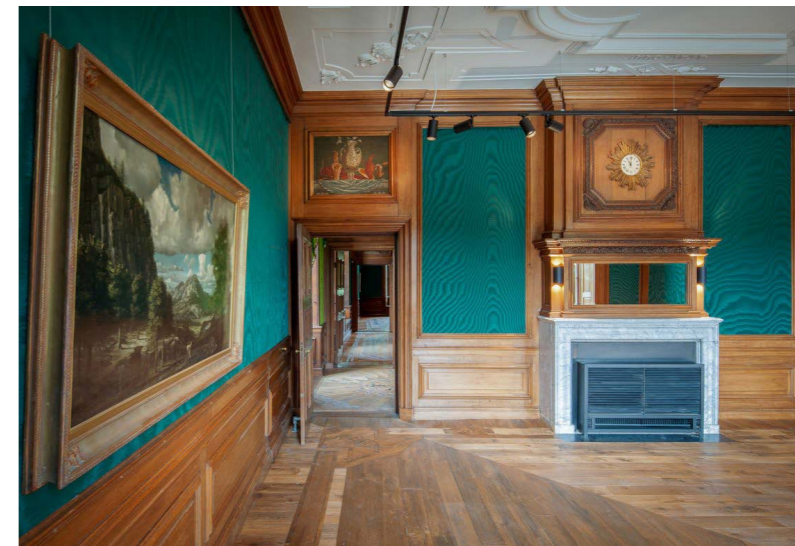
(Toptrouwlocaties, n.d.a)



(Oostendorp, n.d.)



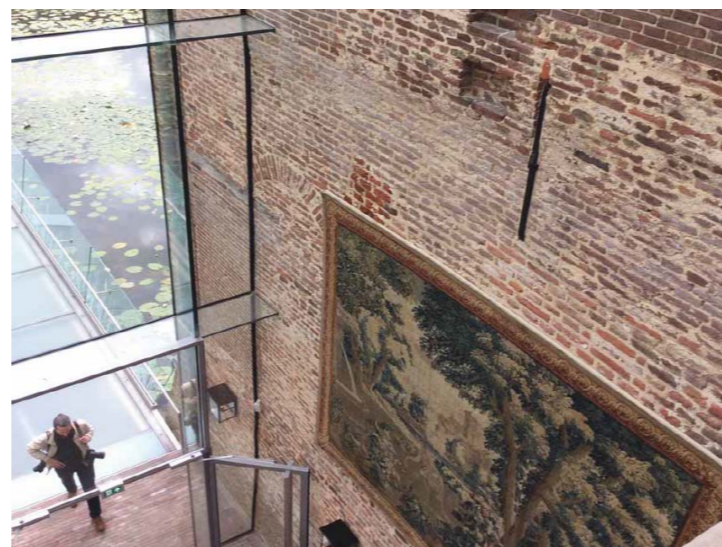
(Van Roosmalen & Van Oosten, 2017, p. 18)



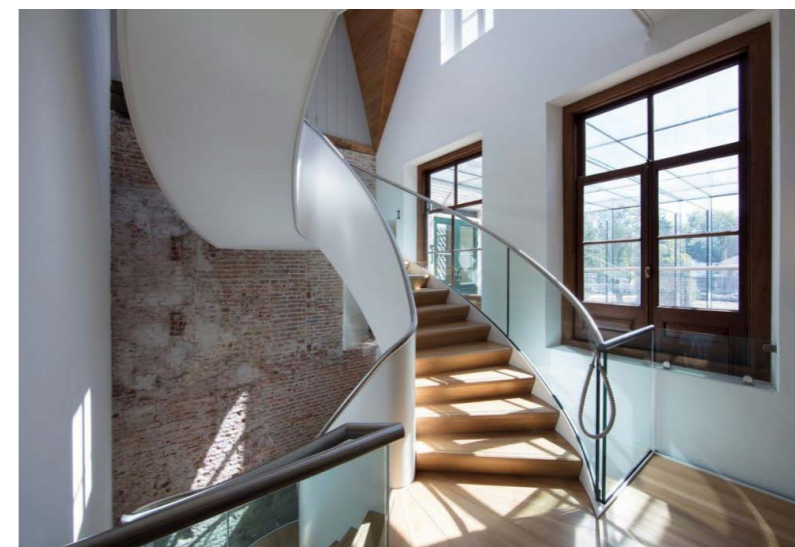
(Oostendorp, n.d.)



(Museum MORE, n.d.)



(Van Roosmalen & Van Oosten, 2017, p. 15)



(Gelderse Streken, n.d.)

USE & FUNCTION



1326 - 1978

Private residence

1978 - 2015

Municipal building (community house)

2017 - now

Museum, restaurant & event location



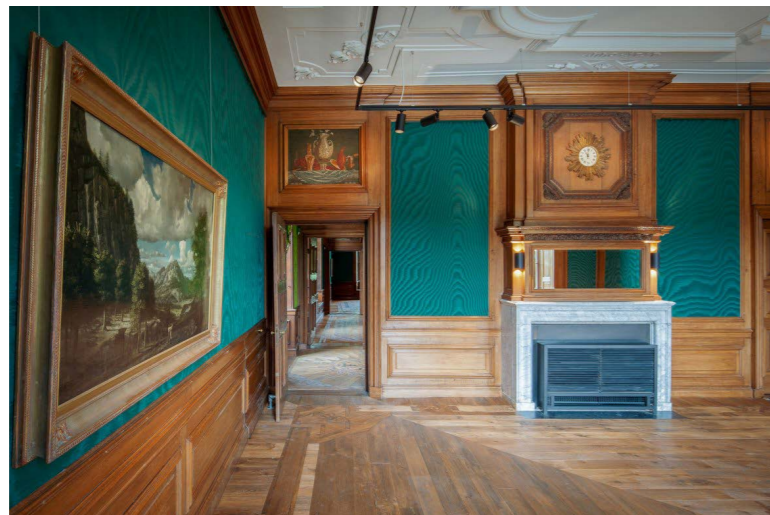
(Van Asselt, 2020)



(Toptrouwlocaties, n.d.)



(Van Roosmalen & Van Oosten, 2017, p. 16)



(Oostendorp, n.d.)



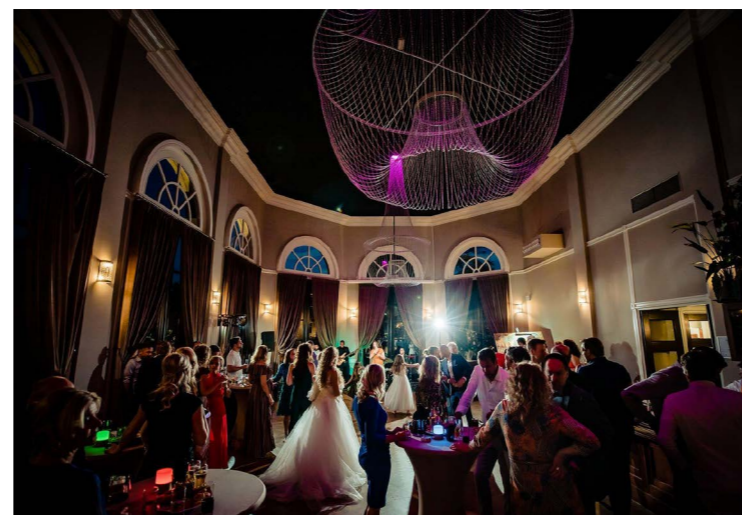
(Oostendorp, n.d.)



(Toptrouwlocaties, n.d.)



(Toptrouwlocaties, n.d.)



(Toptrouwlocaties, n.d.)



(Oranjerie Ruurlo, n.d.)

BUILDING TYPOLOGY

	Hackfort	Vorden	Ruurlo	Verwolde	Dorth	De Voorst	't Velde
Started as a moated site (a residential tower, or 'spieker', surrounded by water)	X	X	X	X	X	X	X
Originally built as fortified house (to gain access to the knightlyhood)	X	X	X	X	X	X	X
Long history of owners	X	X	X	X	X	X	X
Large estate with main building and some side buildings (like a coach house, orangery, stable and farms)	X	X	X	X	X	X	X
Historically developed building(s) (developed in different stages with many adjustments over time)	X	X	X	X	X	X	X
Historically developed estate and garden design (often classicist style and/or English landscape style)	X	X	X	X	X	X	X
Strong relation between buildings and estate	X	X	X	X	X	X	X
Rich materialization and finish of the interior (often representative for the habitation history)	X			X	?		X
Brickwork facade and construction	X	X	X	X	X		X
Windows with rod division (muntins)	X	X	X	X	X	X	X
Hipped roofs with dormers	X	X	X	X	X	X	X
Clear entrance	X	X	X	X	X	X	X
Chimney(s)	X	X	X	X	X	X	X
Detailed roofedge	X	X	X	X	X	X	X
Shutters	X	X		X	X		

Table X.
Characteristics that form the building typology of a fourteenth-century havezate from Het Kwartier van Zutphen

Legend

- x = characteristic noticed during the research
? = interior of Huis Dorth is not known, due to its protection as being a private residence

Main approach:**continuation of (construction) history**
(adding a new timelayer)

- **Family crests** on the exterior and interior (referring to the most influential families that have lived there)

- Signs of historic development in the **exterior brickwork** (differences in size and color of bricks) (the brickwork of a former exterior wall is kept visible along the main staircase)

- **New glazing in existing window frames** (extra thin insulating double glazing with solar coating, from Monuglas) (keeping the characteristics and detailing, but with improved performance)

- **Adding to the historic development** with new volume and bridge of glass (easily remountable)

- Showing historic garden development with **different pavements**

- **Rich materialisation and detailing of the interior** (showing nobility, with references to the former owners) (floor and ceiling detailing reflect one another)

- **Large contrast between old and new** to make the division clear (glass volume, new central staircase)

- **Documentary movie room** about the history of the building, owners and art(ist)

- **Shop** with products about the museum and building, also about things in the environment



(Museum MORE-Kasteel Ruurlo, 2017)



(Museum MORE-Kasteel Ruurlo, 2017)



(Van der Ploeg, 2017, p. 22)



(Van der Ploeg, 2017, p. 24)



(Van der Ploeg, 2017, p. 26)



(Google Earth, 2021)



(Google Earth, 2021)



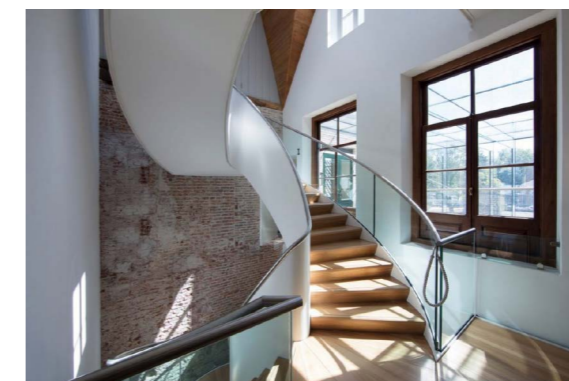
(Van Asselt, 2020)



(Museum MORE-Kasteel Ruurlo, 2017)



(Museum MORE-Kasteel Ruurlo, 2017)



(Gelderse Streken, n.d.)



(Flickr/Coppens, 2018)

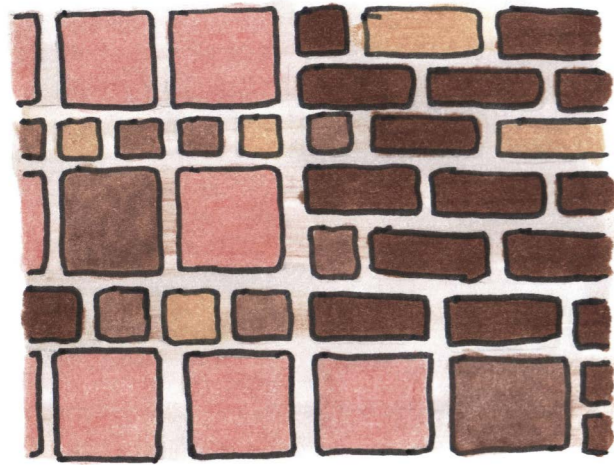
DESIGN TOOLBOX

	Hackfort	Vorden	Ruurlo	Verwolde	Dorth	De Voorst	't Velde
Family crests integrated in interior and/or exterior	X	X	X	X		X	
Construction history visible in the exterior	X	X	X				X
Continuing the historical development with a new addition			X				
Recognizable historic layers in the landscape	X	X	X	X	X	X	X
Clear sightlines to strengthen relationship between estate and building(s)	X	X	X	X	X	X	X
Re-integrate former/lost paths					X		
Landscape elements hinting historically important parts					X	X	
Keeping the interior as original as possible		X		X		X	
(Re-integrated) original colors	X			X			
Exhibition about the history	X		X	X			
Information signing	X	X		X	X	X	X
Different pavements to show historic layers		X	X				
Water wells to refer to the early inhabitation	X	X					X
Special tours/walks				X	X		X
Shop			X	X			
Café	X	X	X	X			

Table X.
Design toolbox

Legend

x = intervention or instrument used in the particular case study



History approach

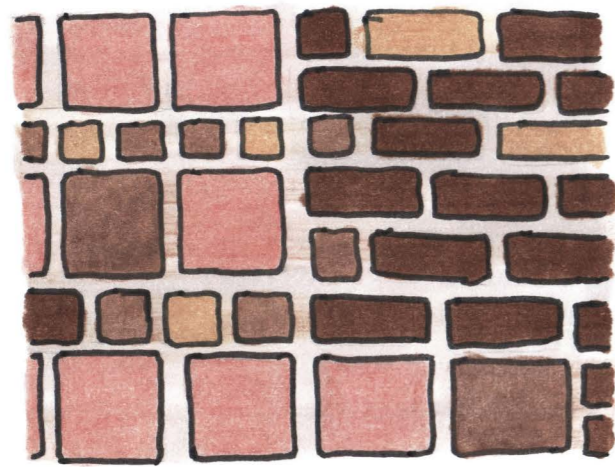


Addition approach

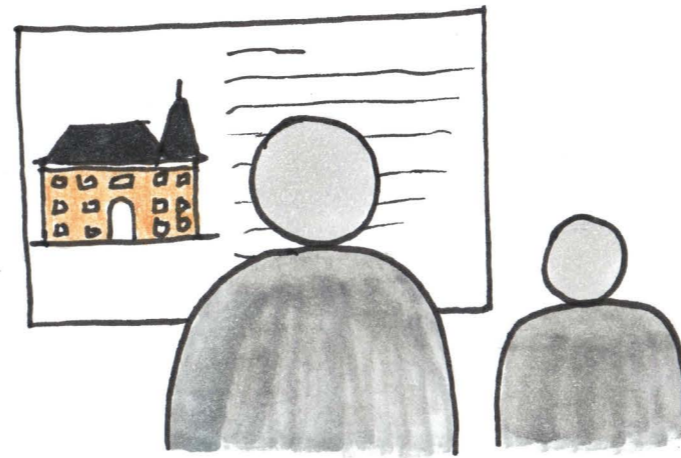


Landscape approach

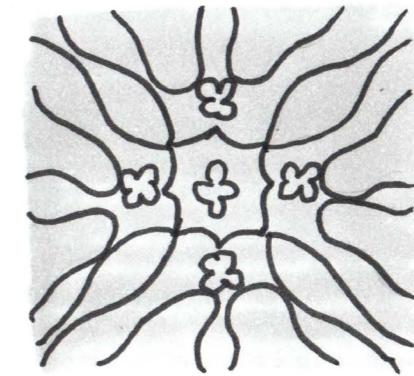
HISTORIC APPROACH



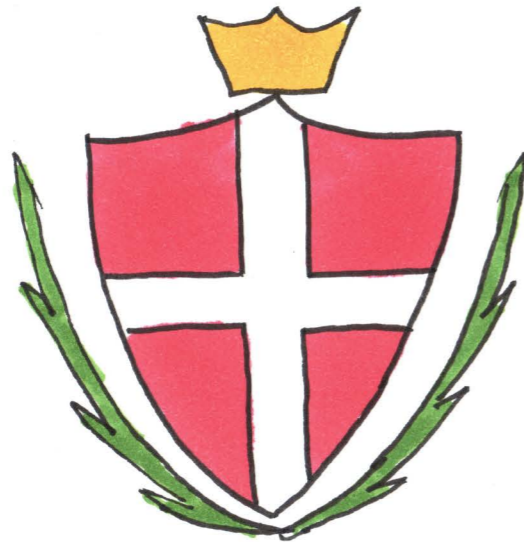
HISTORIC DEVELOPMENT
VISIBLE IN THE EXTERIOR
BRICKWORK



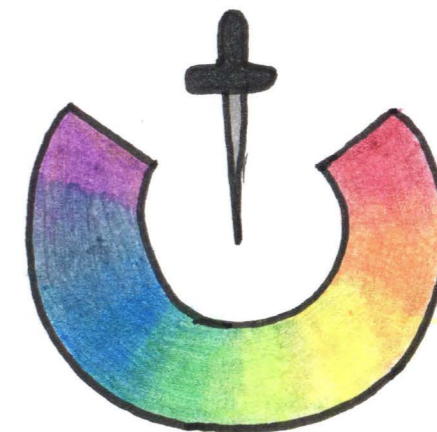
EXHIBITION ABOUT THE
HISTORY AND OWNERS



REFINED DECORATION
OF THE INTERIOR
(LIKE STUCCO AND CHIMNEYS)



FAMILY CRESTS ON PARTS
OF THE INTERIOR

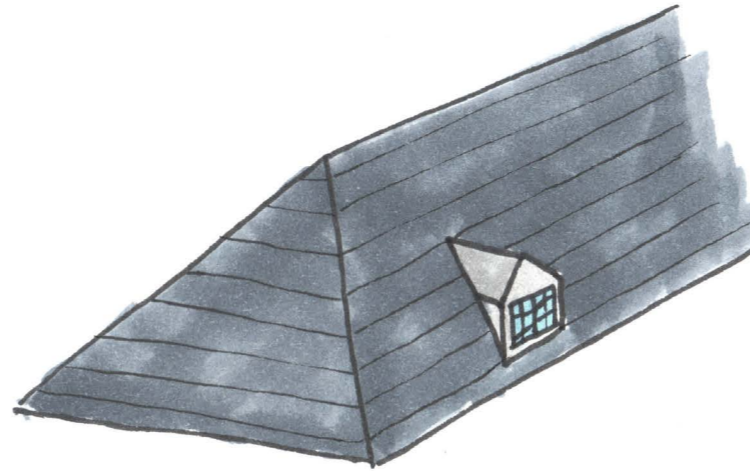


INTERIOR COLOR PALETTE
BASED ON HISTORY OF
OWNERS

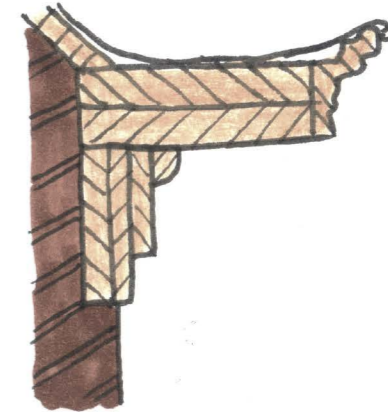
ADDITION APPROACH



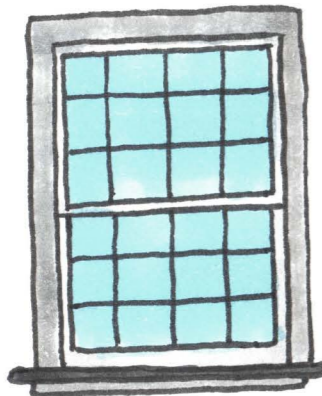
CHIMNEYS



HIPPED ROOFS
WITH DORMERS



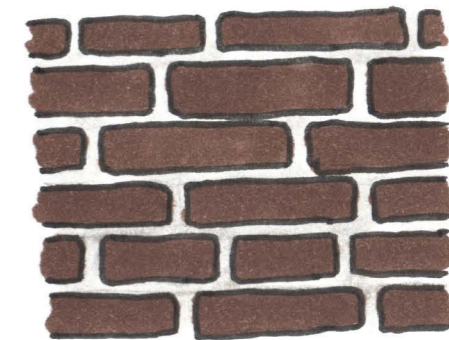
DETAILED ROOF EDGES



WINDOWS WITH
ROD-DIVISION

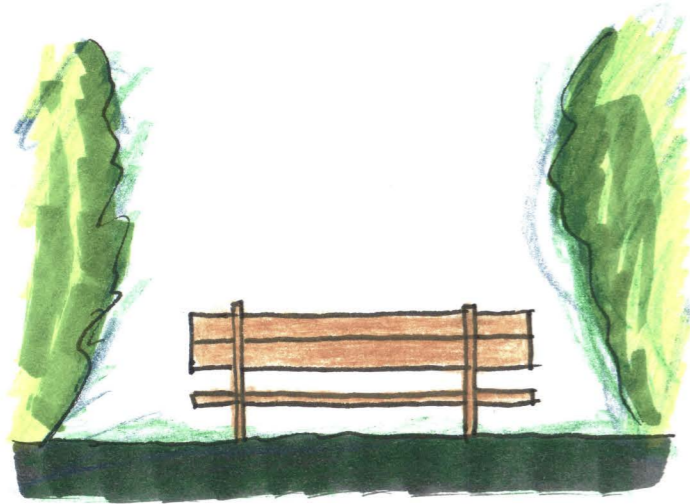


CLEAR ENTRANCE



BRICKWORK FACADE
AND CONSTRUCTION

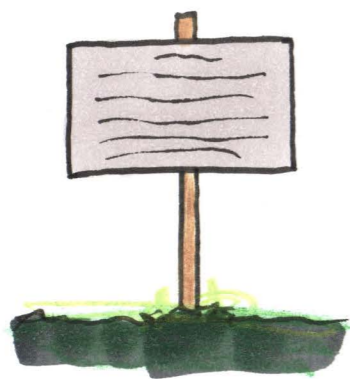
LANDSCAPE APPROACH



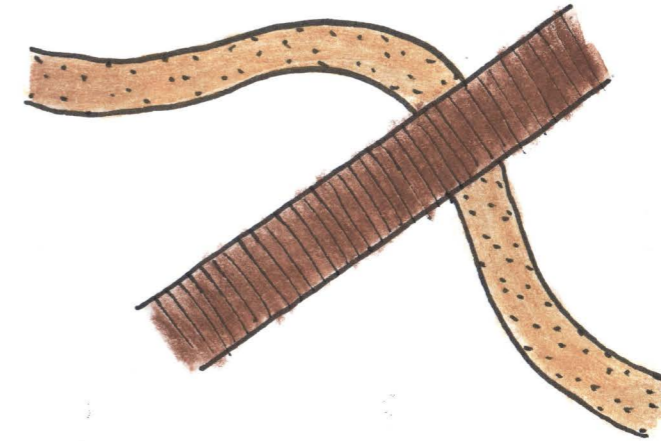
BENCHES PLACED ON SIGHTLINES TO ENJOY THE VIEW



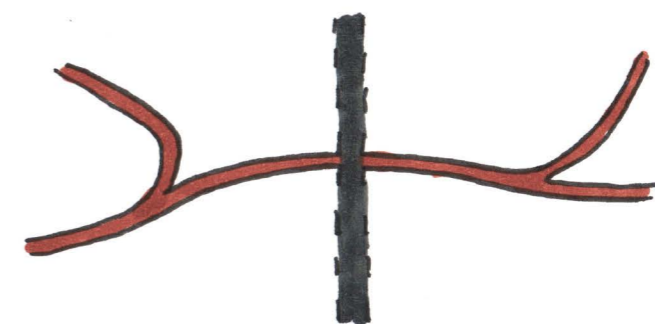
GROUPS OF TREES OR PLANTING TO HINT FOR IMPORTANT HISTORIC LAYERS IN THE LANDSCAPE



SIGNING ON MULTIPLE SPOTS IN THE ESTATE TO INFORM THE PUBLIC

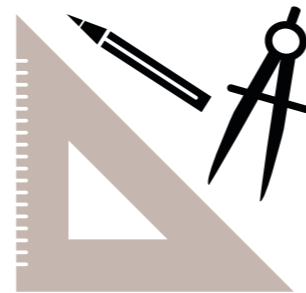


VARIATION IN PAVEMENT TO SHOW DIFFERENTIATION IN HISTORIC DESIGNS



RE-INTRODUCE LOST PATHS THAT ARE IMPORTANT TO SHOW THE HISTORIC DEVELOPMENT

DESIGN

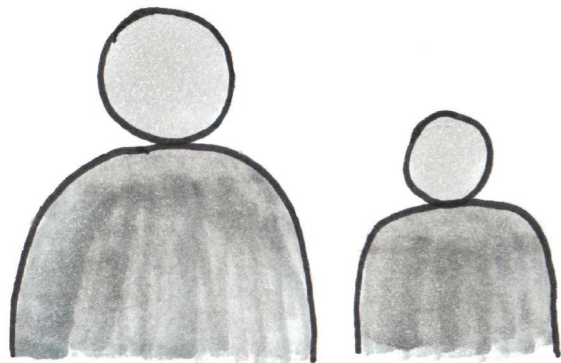


HAVEZATE EXPERIENCE

Make the **building typology experienceable** to the public



Make the **building typology experienceable** to the public



Attracting people to the estate

Introduce **public functions** in the buildings

Show the characteristics of the havezate typology in the estate and both the interior and exterior of the buildings



Hotel ★★★

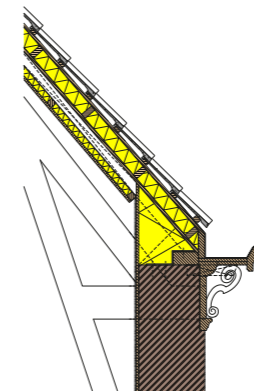
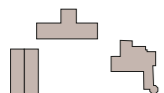
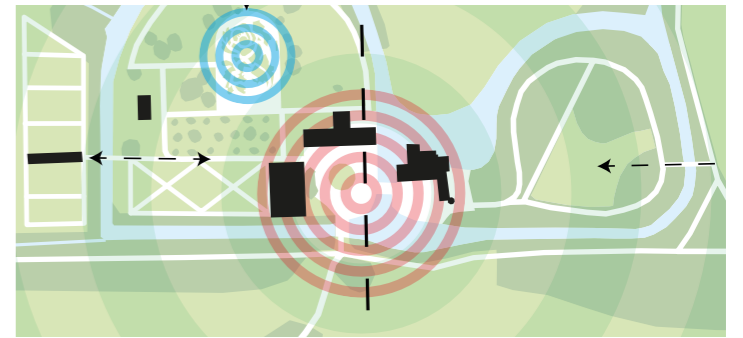
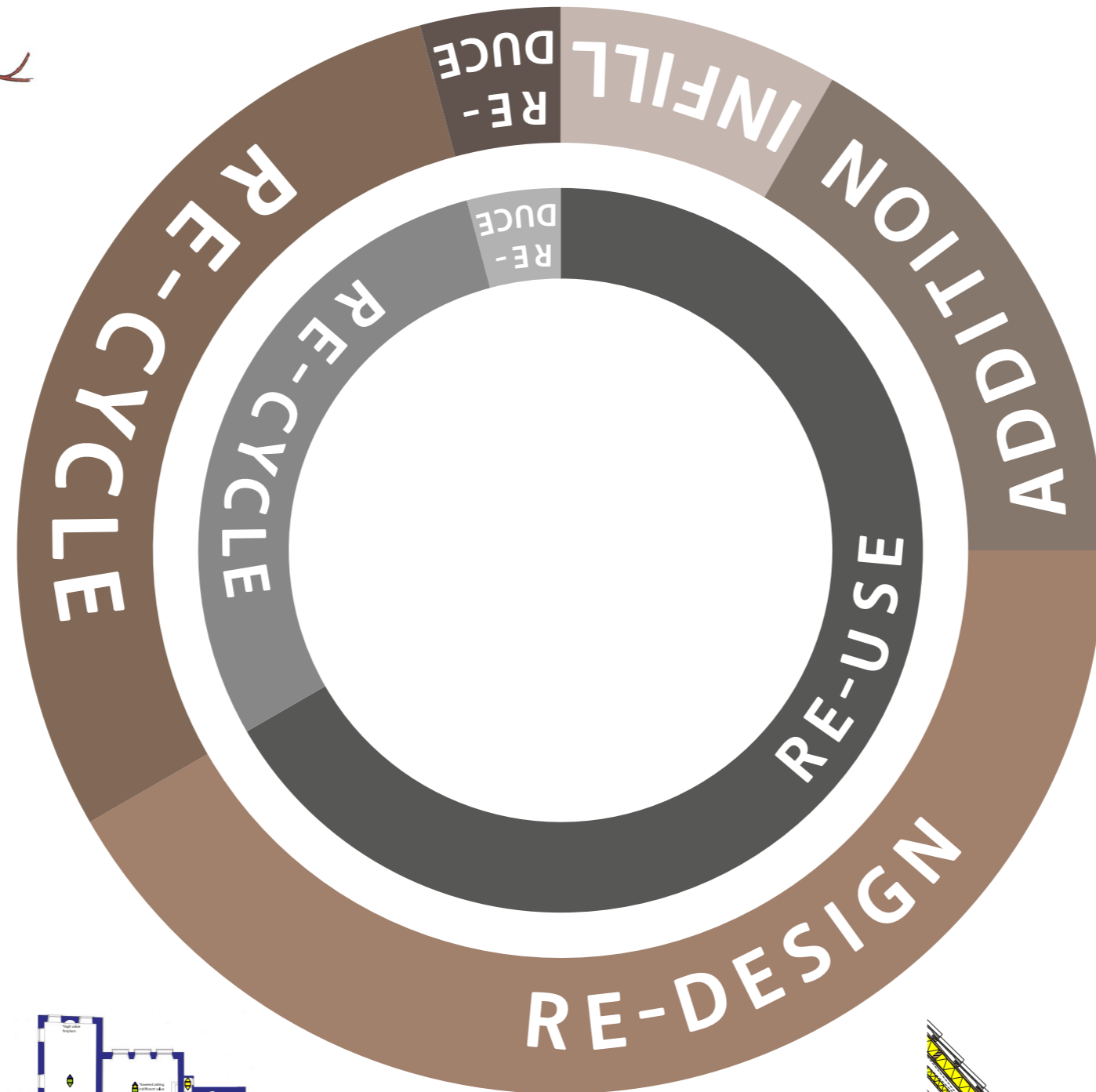
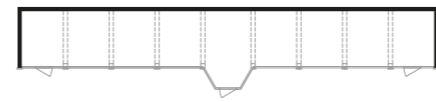
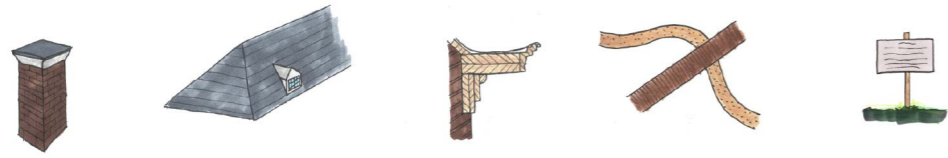
Wine tasting area

Restaurant

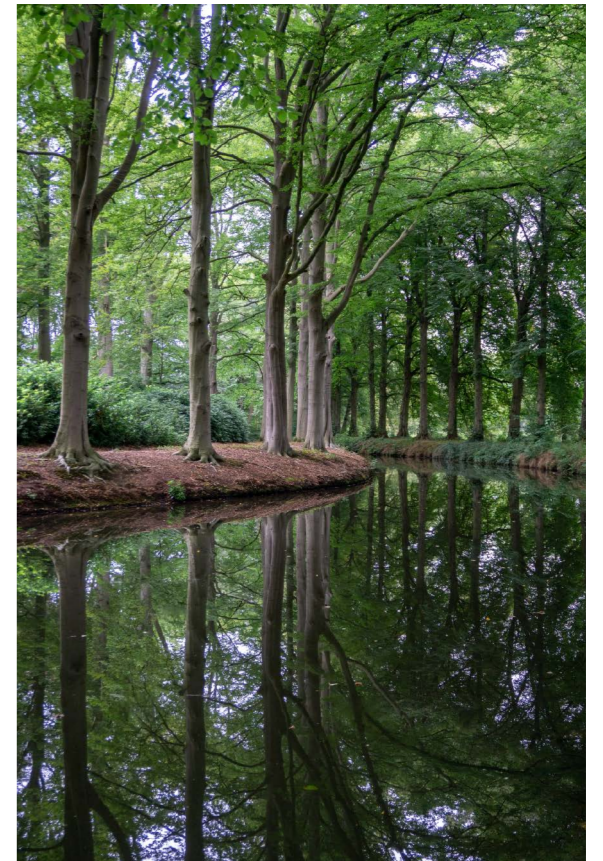
Shop

Rental rooms

HERITAGE POSITION



CURRENT SITUATION ESTATE

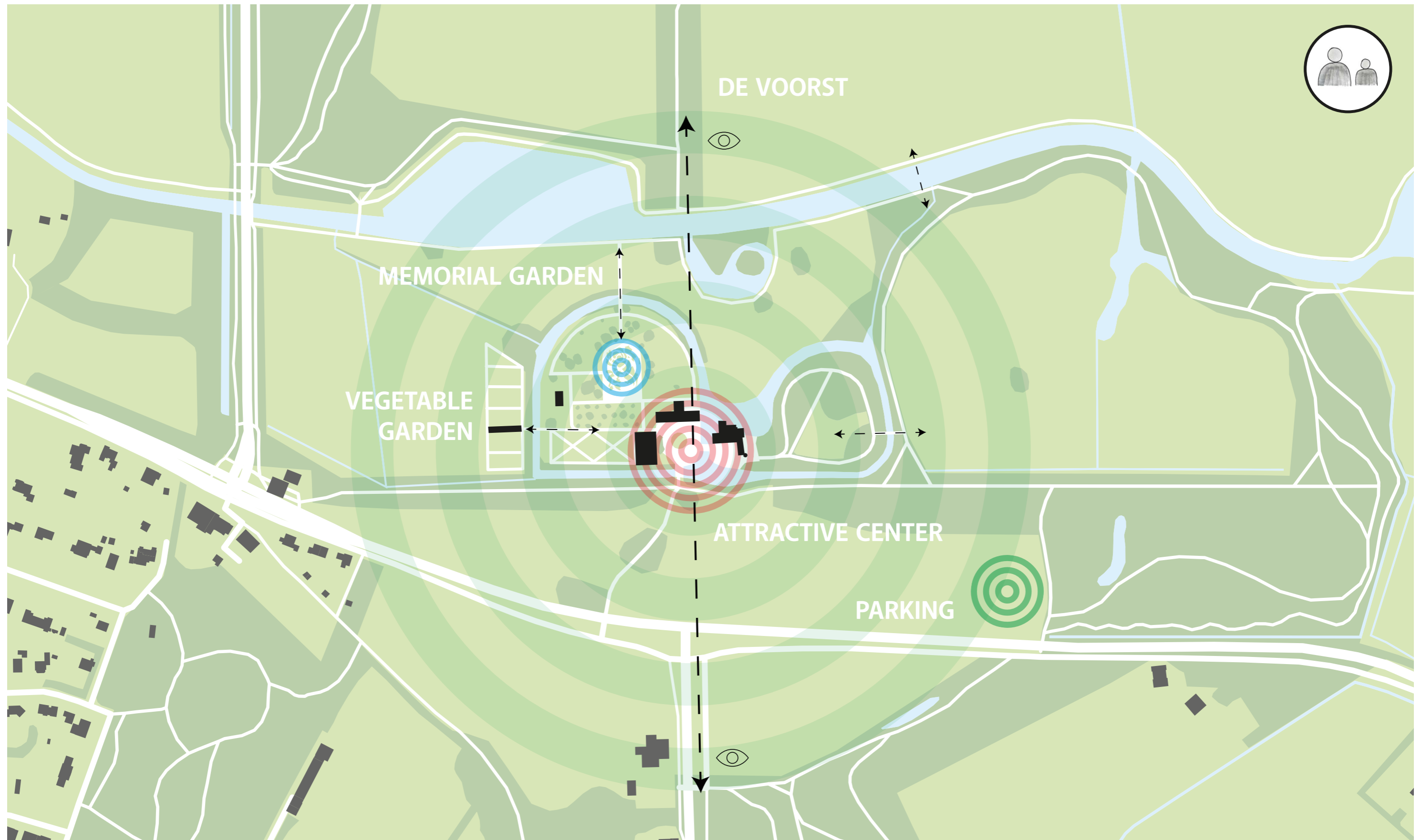


Parking and bird's house as borders on the inner part of the estate



Water as border, leaving the islands isolated

VALUE FOR THE SURROUNDINGS

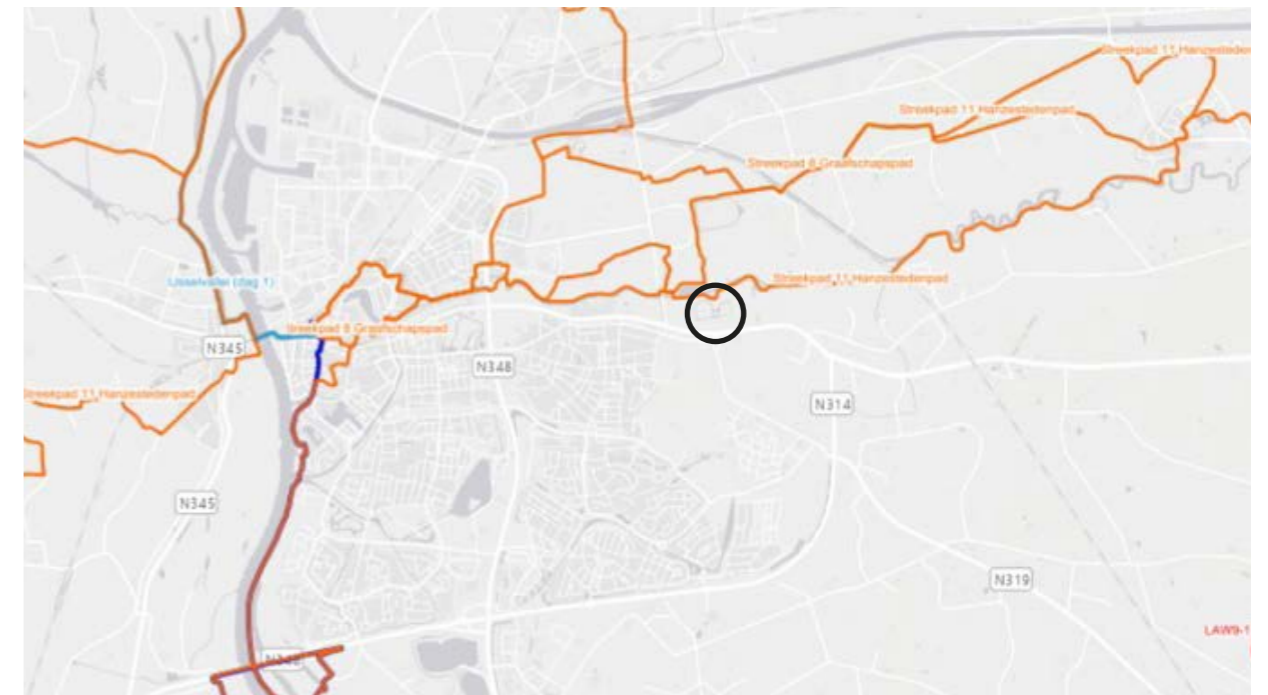




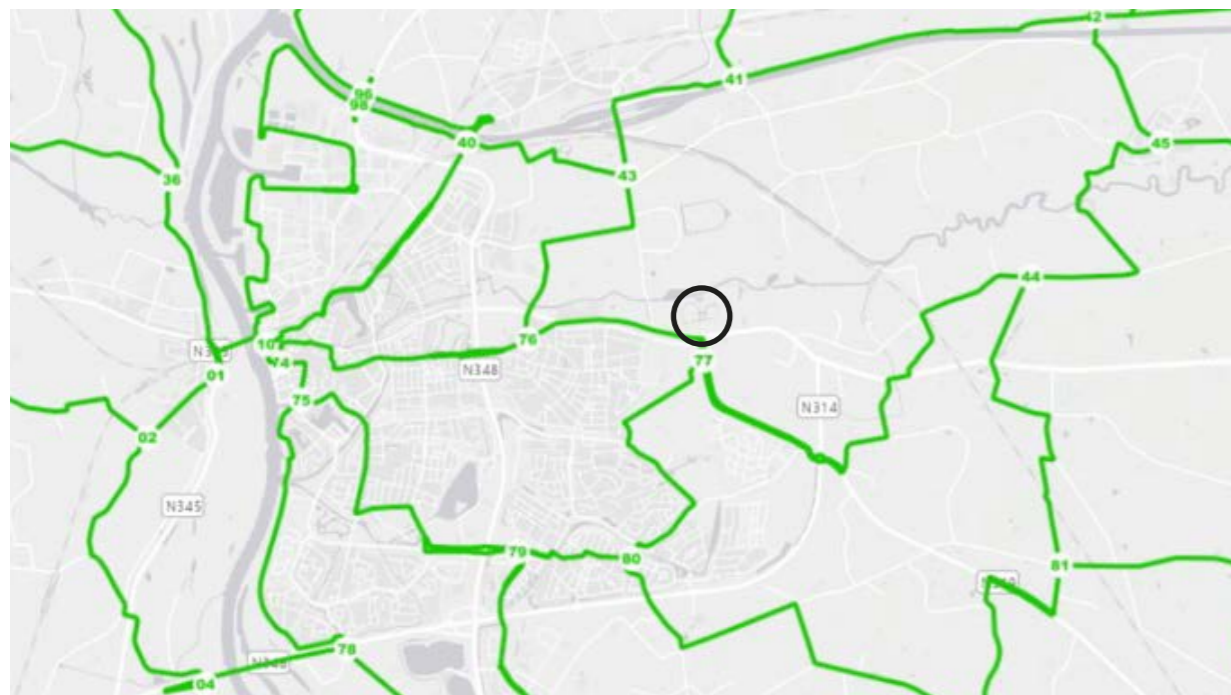
National cycling networks (PBL, 2022)



(Van Asselt, 2021)



National hiking networks (PBL, 2022)



Regional cycling networks (PBL, 2022)



(Van Asselt, 2021)



Regional hiking networks (PBL, 2022)



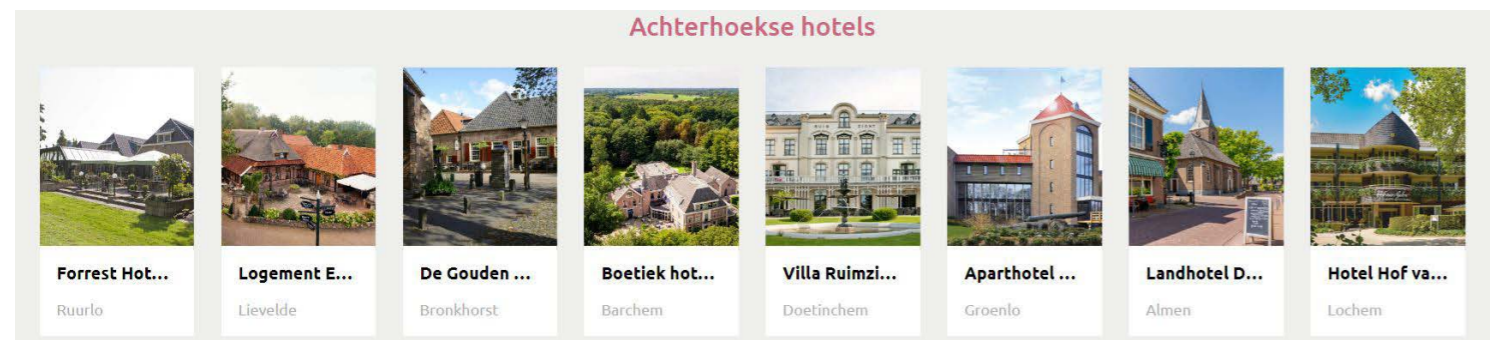
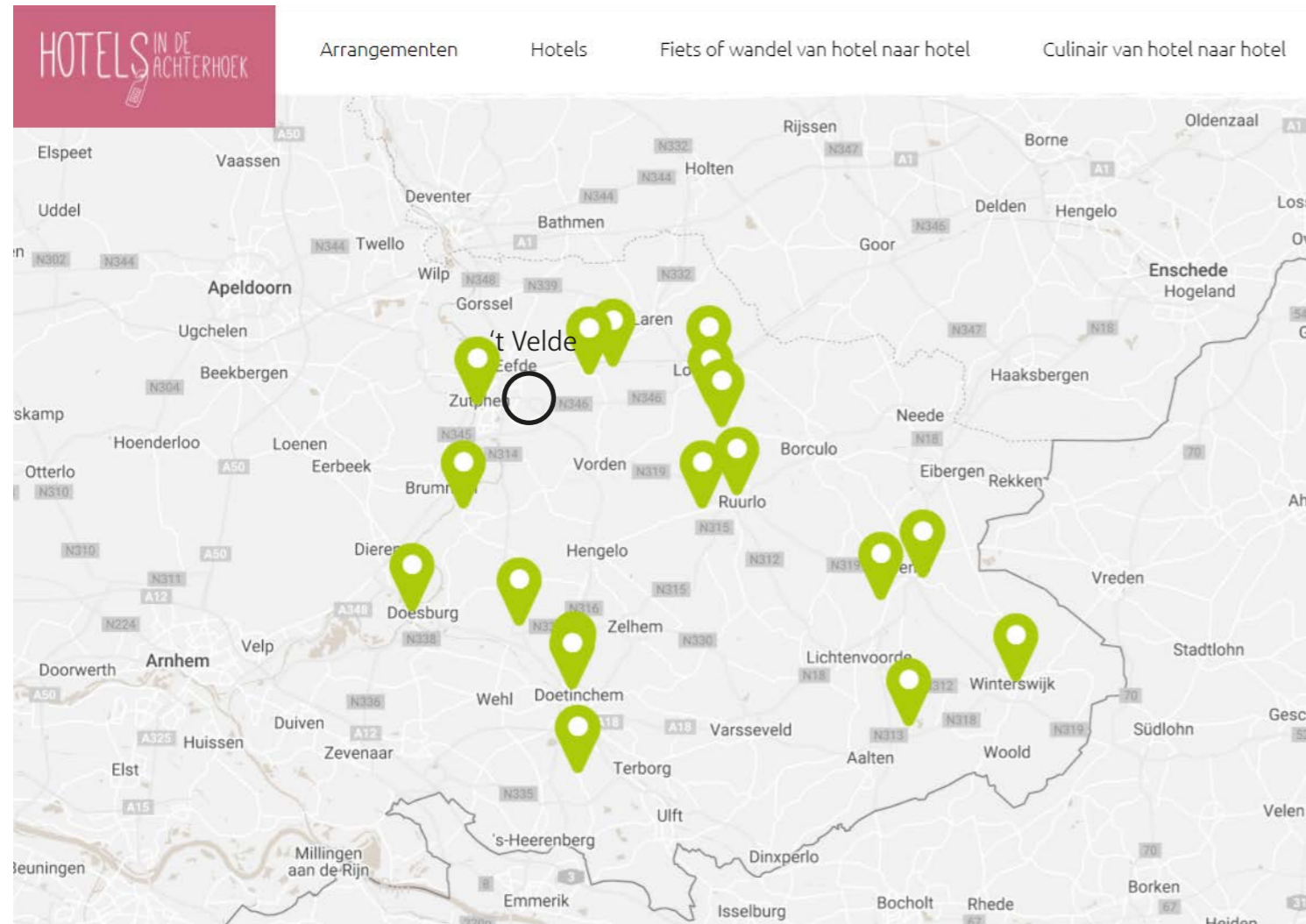
CYCLING NETWORK



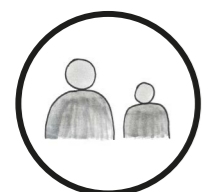
(Van Asselt, 2021)

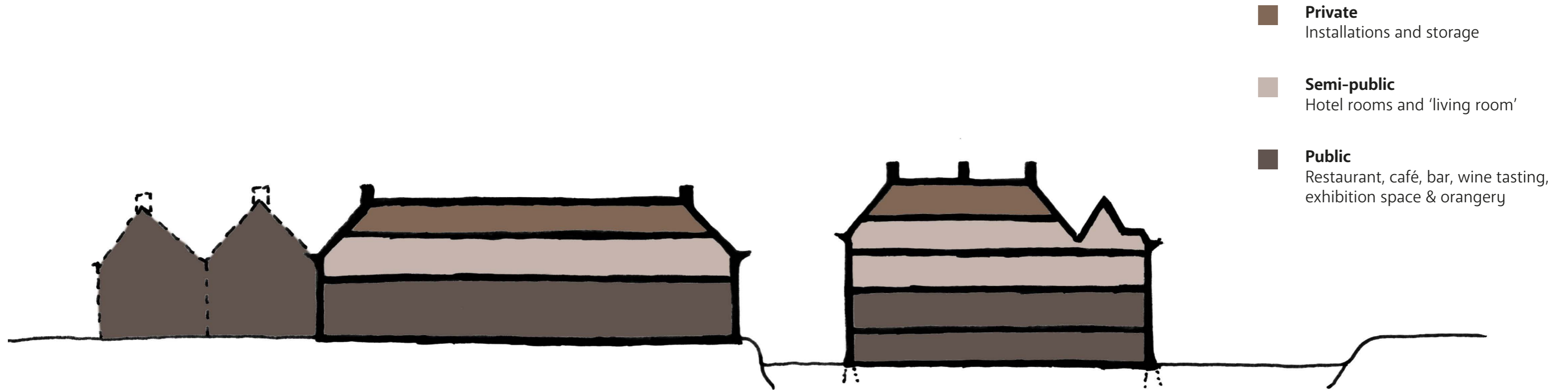


HIKING NETWORK



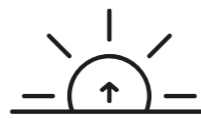
(Hotelsindeachterhoek, n.d.)





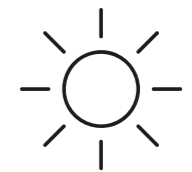
Morning ($\pm 07:00h - 12:00h$)

- Breakfast in the restaurant
- Walking / hiking / biking
- Lounge & living room
- Reception



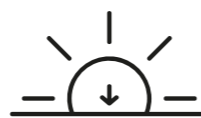
Afternoon ($\pm 12:00h - 17:00h$)

- Café / lunchroom
- Walking / hiking / biking
- Shop
- Wine tasting & bar



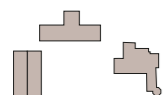
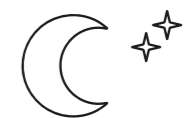
Evening ($\pm 17:00h - 23:00h$)

- Restaurant
- Lounge & living room
- Bar

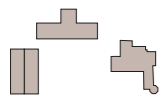
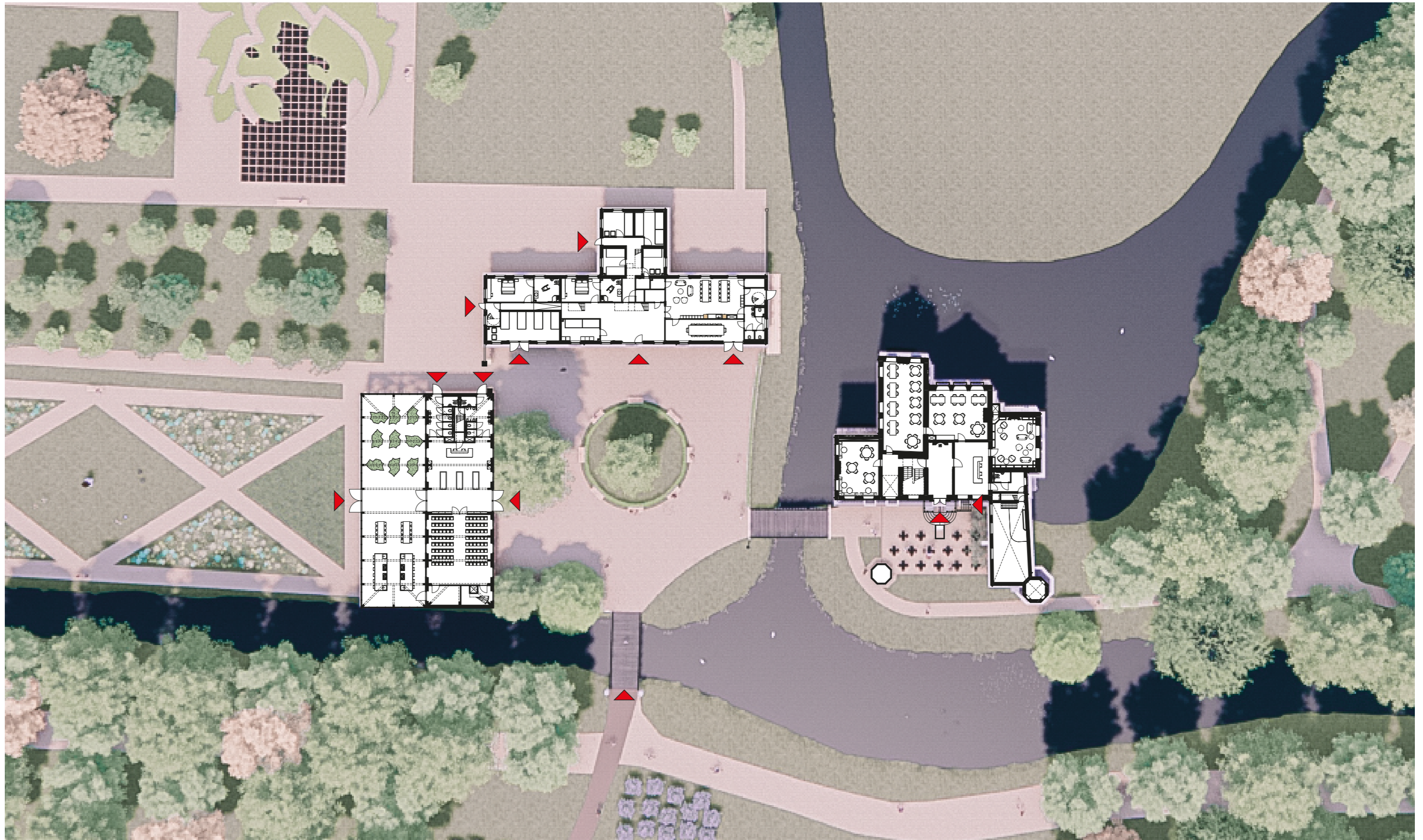


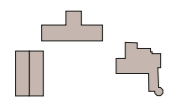
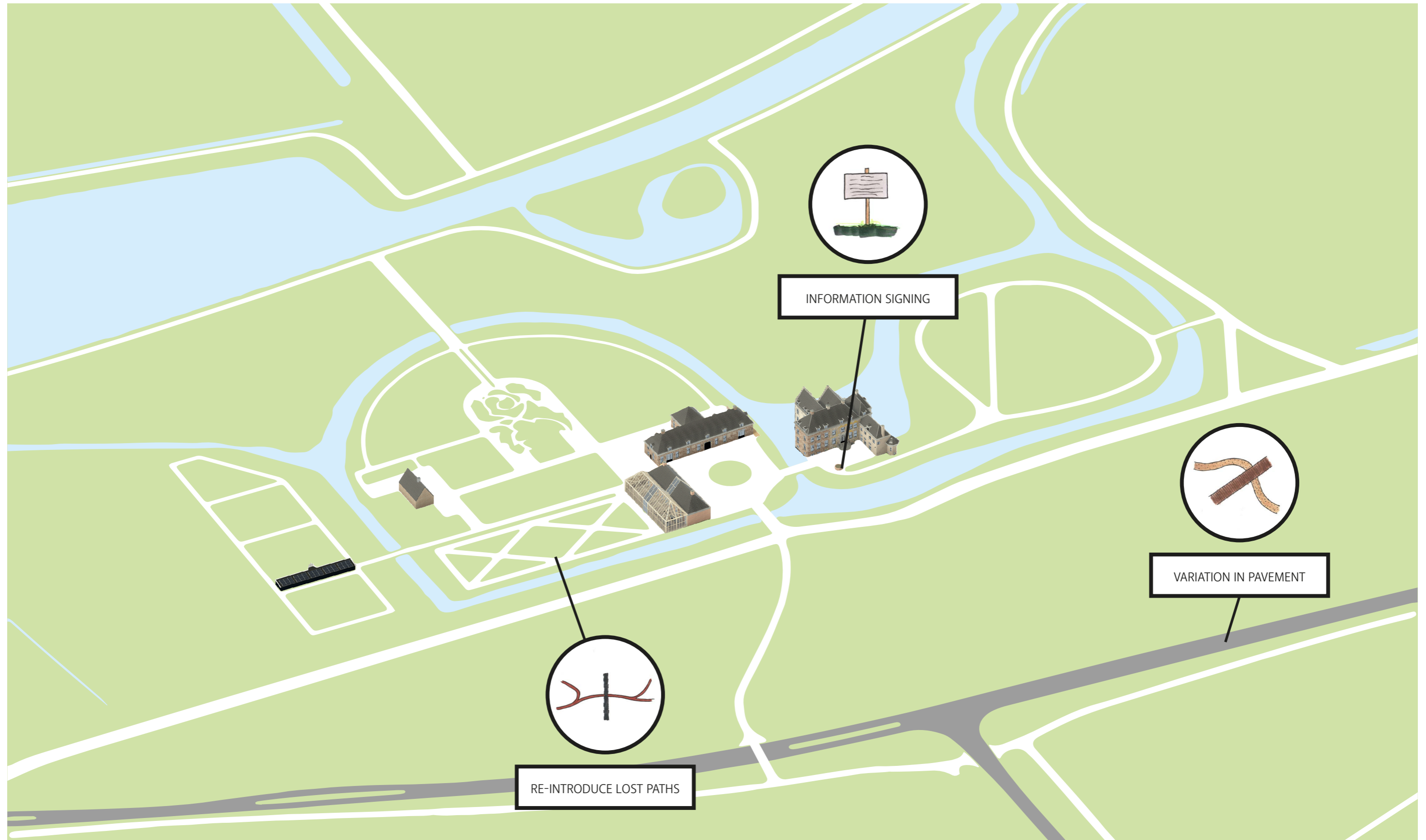
Night ($\pm 23:00h - 07:00h$)

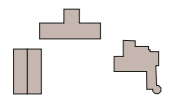
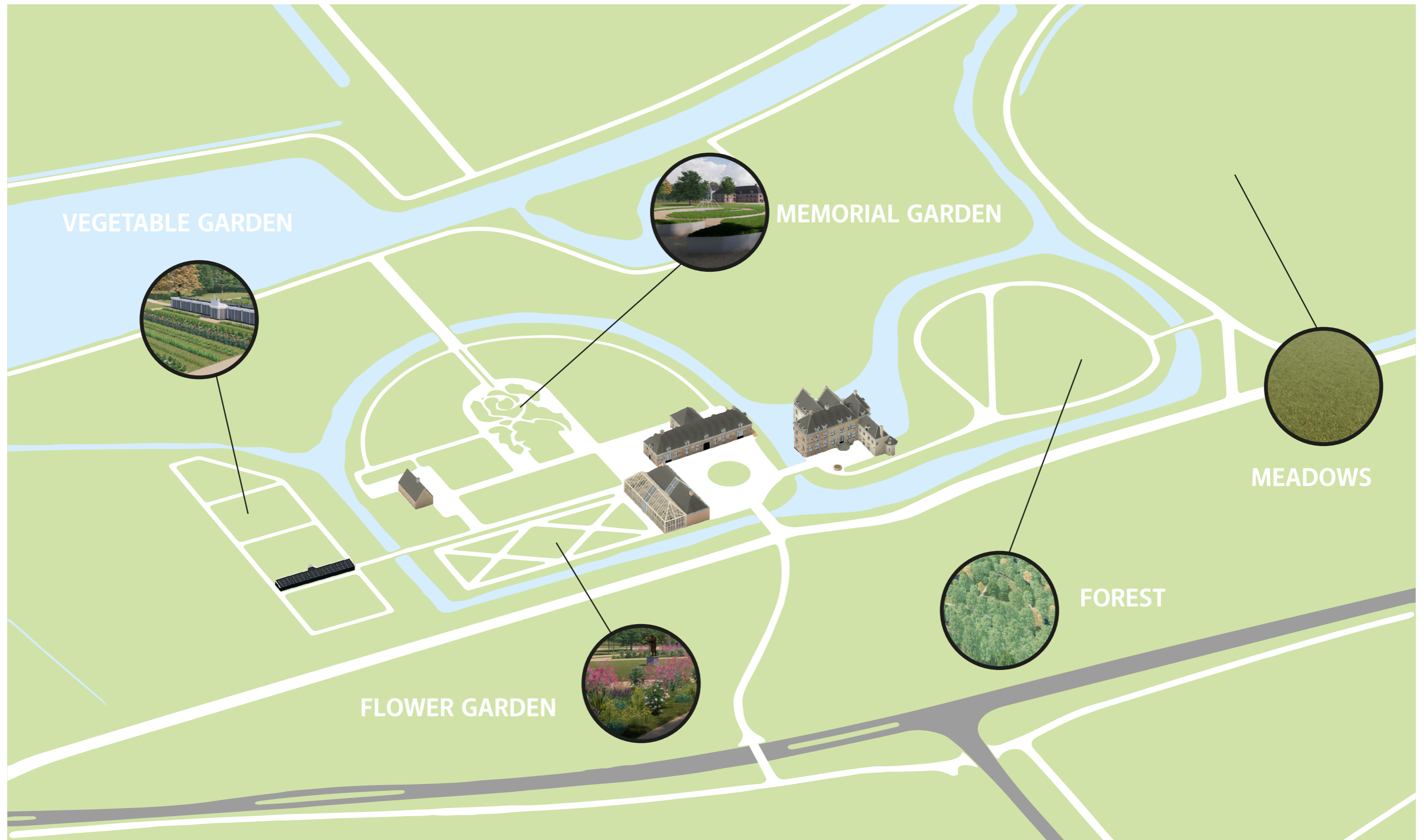
- Hotel rooms
(in main building and coach house)



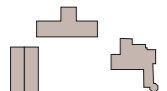
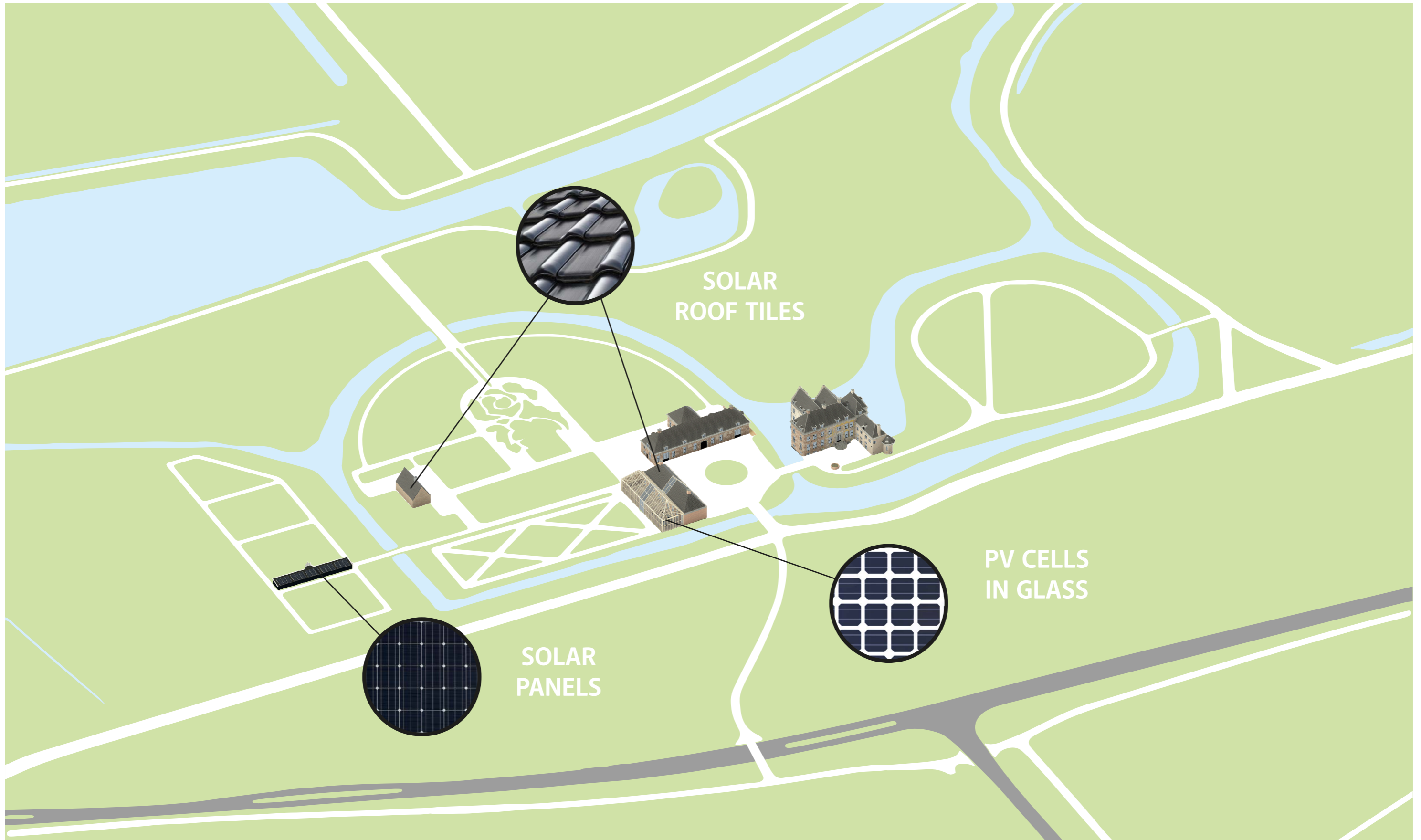
ACCESSIBILITY







ENERGY SOURCES



“Dus langzaam maar zeker is het huis gegroeid vanuit die middeleeuwse kern, die daarin zit, tot de uitbreidingen in de eeuwen die daarna volgden. En dat is **allemaal wit gemaakt** om het op die manier weer **één geheel te laten zijn**, om al die verschillende bouwfases een beetje te verdoezelen. Dus **je moet nu echt goed speuren** en goed zoeken. En dan zie je bouwnaden, dan zie je verschillen tussen het ene en het andere deel en ontdek je langzaam maar zeker hoe die **bouwgiedenis** zich een beetje heeft ontwikkeld.”

- Jorien Jas -

Podcast from *Ridders from Gelre* about 'Huize 't Velde' for Omroep Gelderland, April 24th 2021 (Arendsen & Jas, 2021)



(Van Asselt, 2021)

“De zestiende-eeuwse verbouwing, maar ook latere aanpassingen en renovaties, zorgden ervoor dat Huis 't Velde een - oneerbiedig gezegd - **ratjetoe van bouwstijlen** kreeg. De voorgevel van het hoofdgebouw behield tal van details uit de renaissance, onder meer in de vorm van schelpenmotieven, stucwerk in de hal en schouwen in de verschillende vergaderzalen. Daarentegen bevat de kelder nog **restanten van wat ooit de oorspronkelijke middeleeuwse havezate moet zijn geweest**, net zoals de trapgevels ook aan die havezate herinneren.”

- Johan Bosveld -

Huis 't Velde: een huis met twee gezichten
Published in *Zutphense Courant* op November 10th 2017 (Bosveld, 2017, 51)

“De voorgevel moet uitzonderlijk rijk versierd geweest zijn met banden en cordonlijsten en driehoekige frontons met schelpvulling boven de kruisvensters, alles van mergel. Waarschijnlijk uniek zijn de friezen tussen de kozijnen en de frontons, bestaande uit lagen van vierkante blokjes, afwisselend van baksteen en mergel, en deze blokjes beurtelings boven het ene kozijn recht en boven het volgende op de punt geplaatst. Van dit alles is zoveel onder de pleister terug gevonden, dat een groot deel is hersteld. **Deze zeer levendige versiering hoort natuurlijk in een rode bakstenen gevel. In de witte gevel van thans geeft zij misschien een wat bizar effect, maar ieder was het er over eens, dat zij te curieus is om haar weer onder de muurverf te laten verdwijnen. Om verschillende redenen was het ongewenst de muren niet opnieuw wit te maken, De tijd zal wel helpen om het al te grote contrast wat te verzachten.**”

- Dirk Buurman -

't Velde, published in book
25 jaren stichting Vrienden der Geldersche Kasteelen
(Buurman, 1965, 162-167)



CURRENT FAÇADE FINISH

Kalei (calcareous paint)

REMOVING PAINT

○ ↓ Low pressure

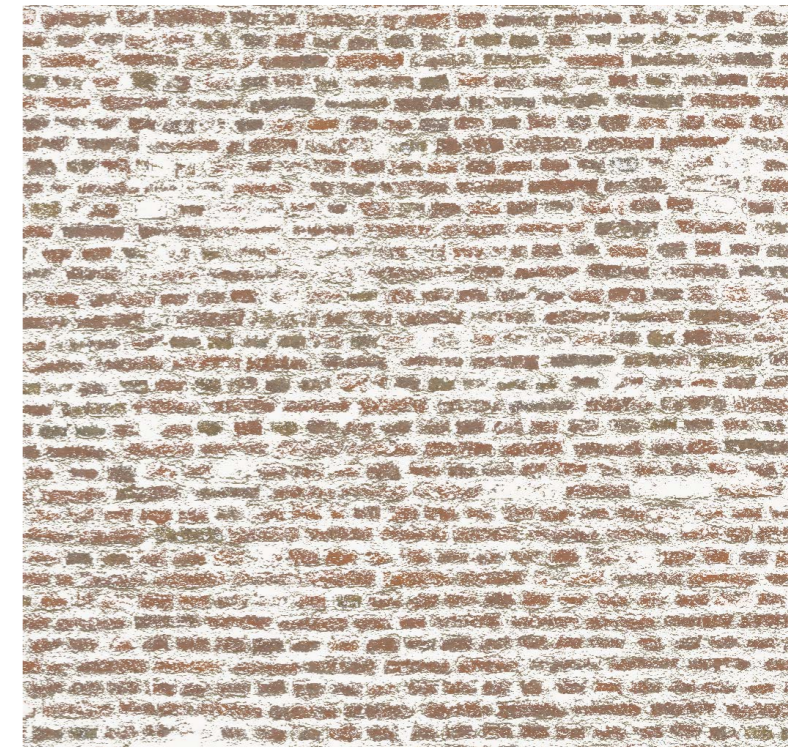
🌡 High temperature



- Excellent for monumental buildings (little damage)
- Mortar repair if necessary
- No post treatment necessary



Aimed looks



Aimed looks



Current situation

(Van Asselt, 2021)



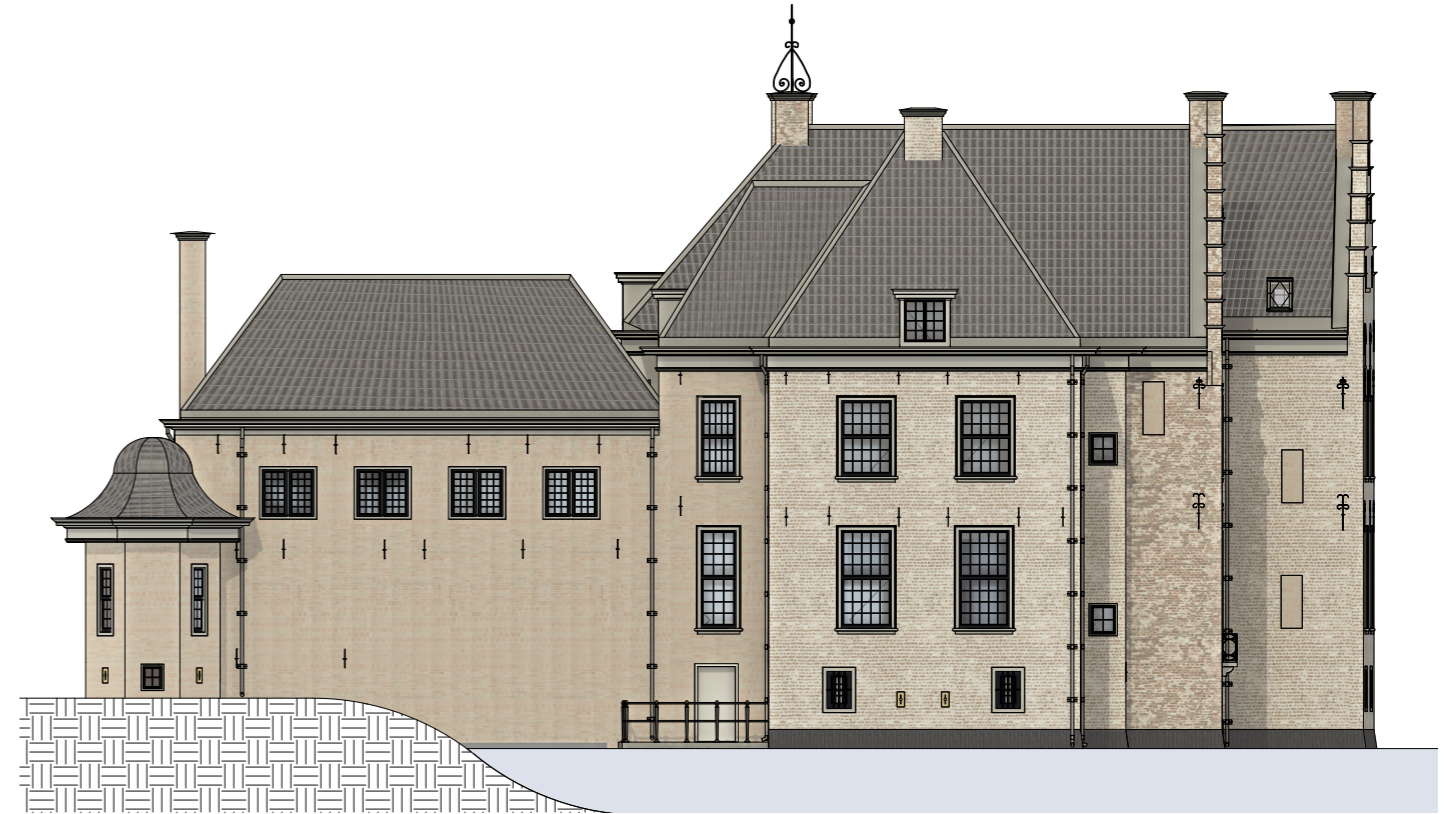
Current situation

(Van Asselt, 2021)



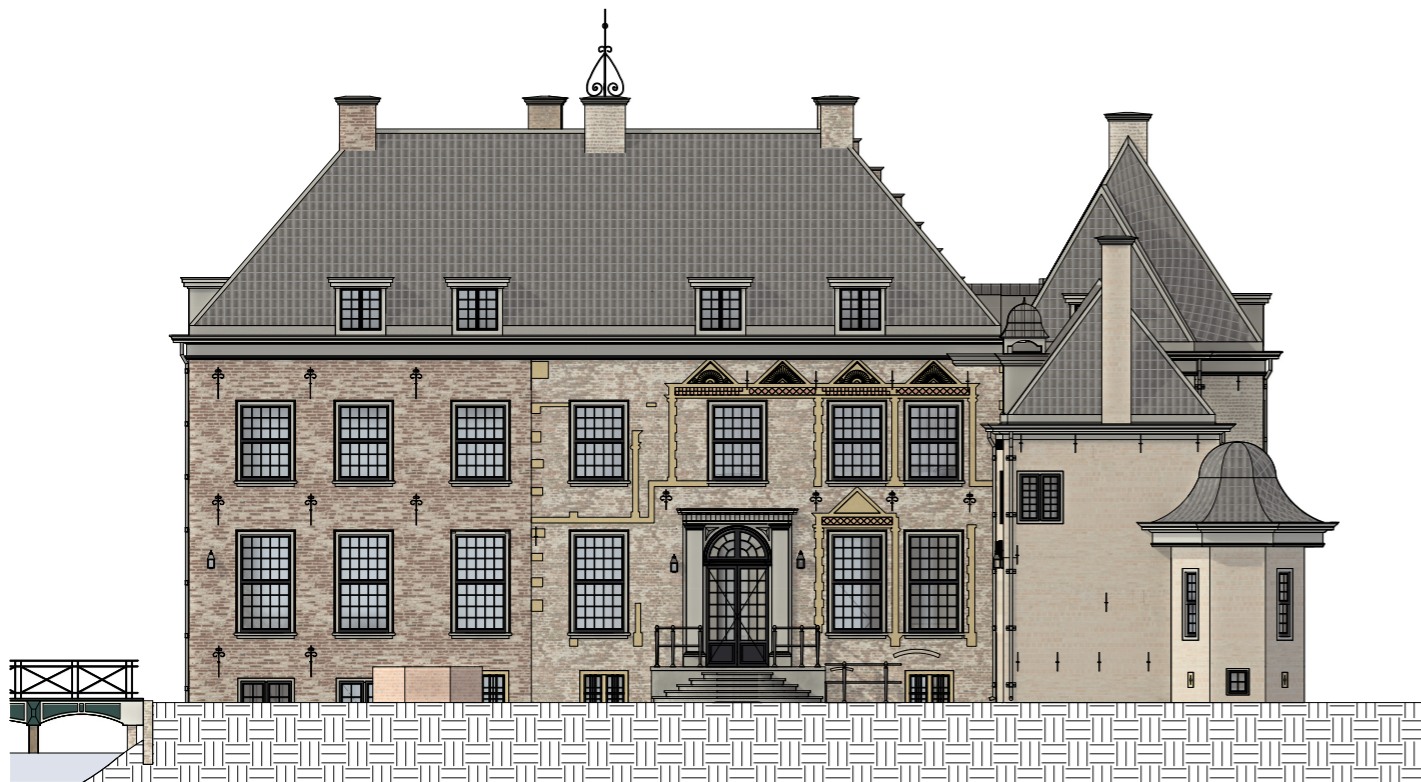
North façade

0 5 M



East façade

0 5 M



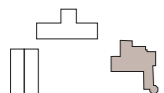
South façade

0 5 M

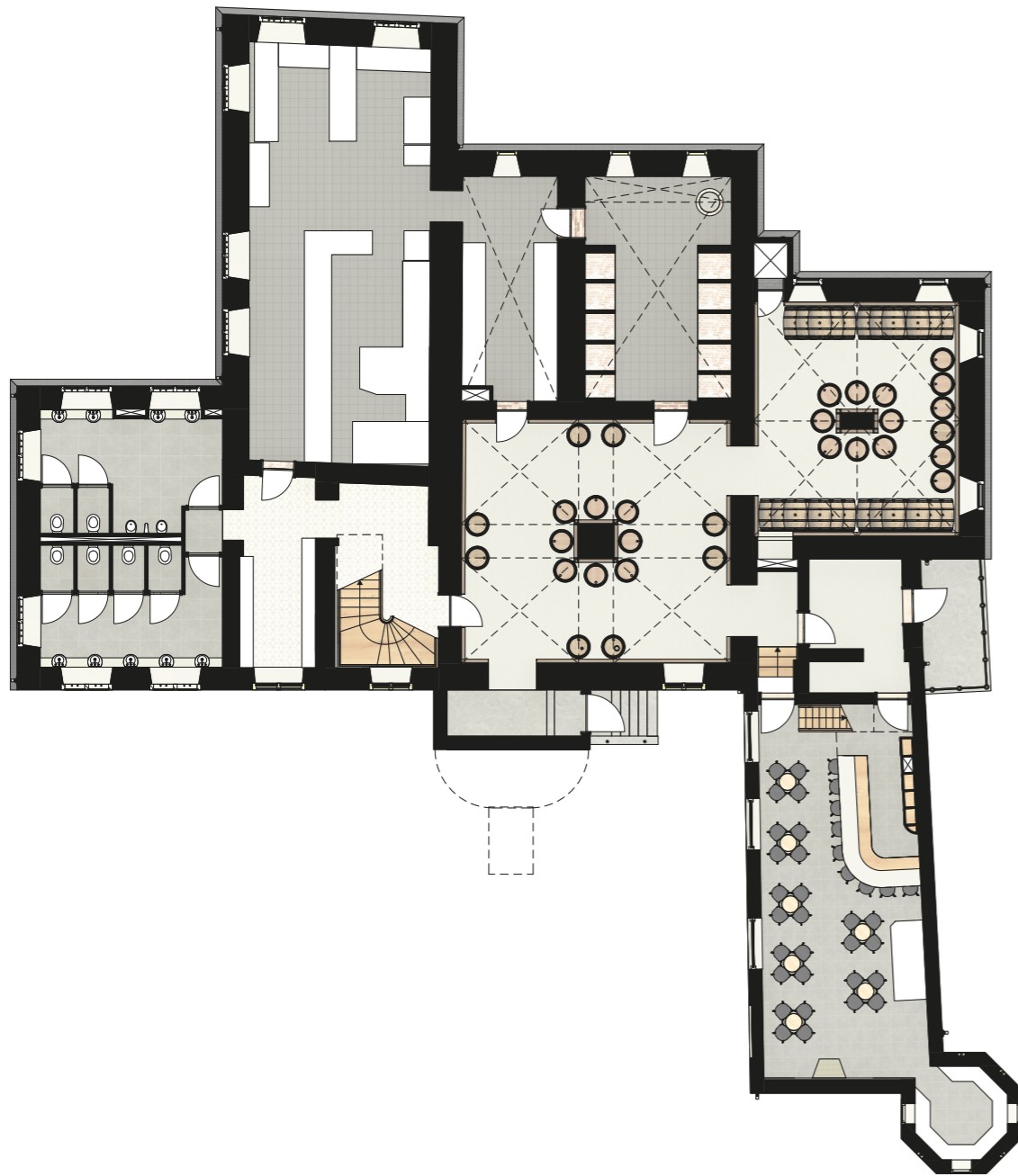


West façade

0 5 M



BASEMENT



(Van Asselt, 2021)



(Van Asselt, 2021)



(Van Asselt, 2021)



(Van Asselt, 2021)



VERENIGDE ACHTERHOEKSE WIJNBOUWERS



ELANOVA



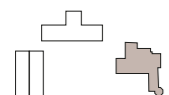
WIJNGOED
KRANENBURG



Wijnbouw
Kunnenman



Schepershof



RE-DESIGN

CURRENT SITUATION

BASEMENT



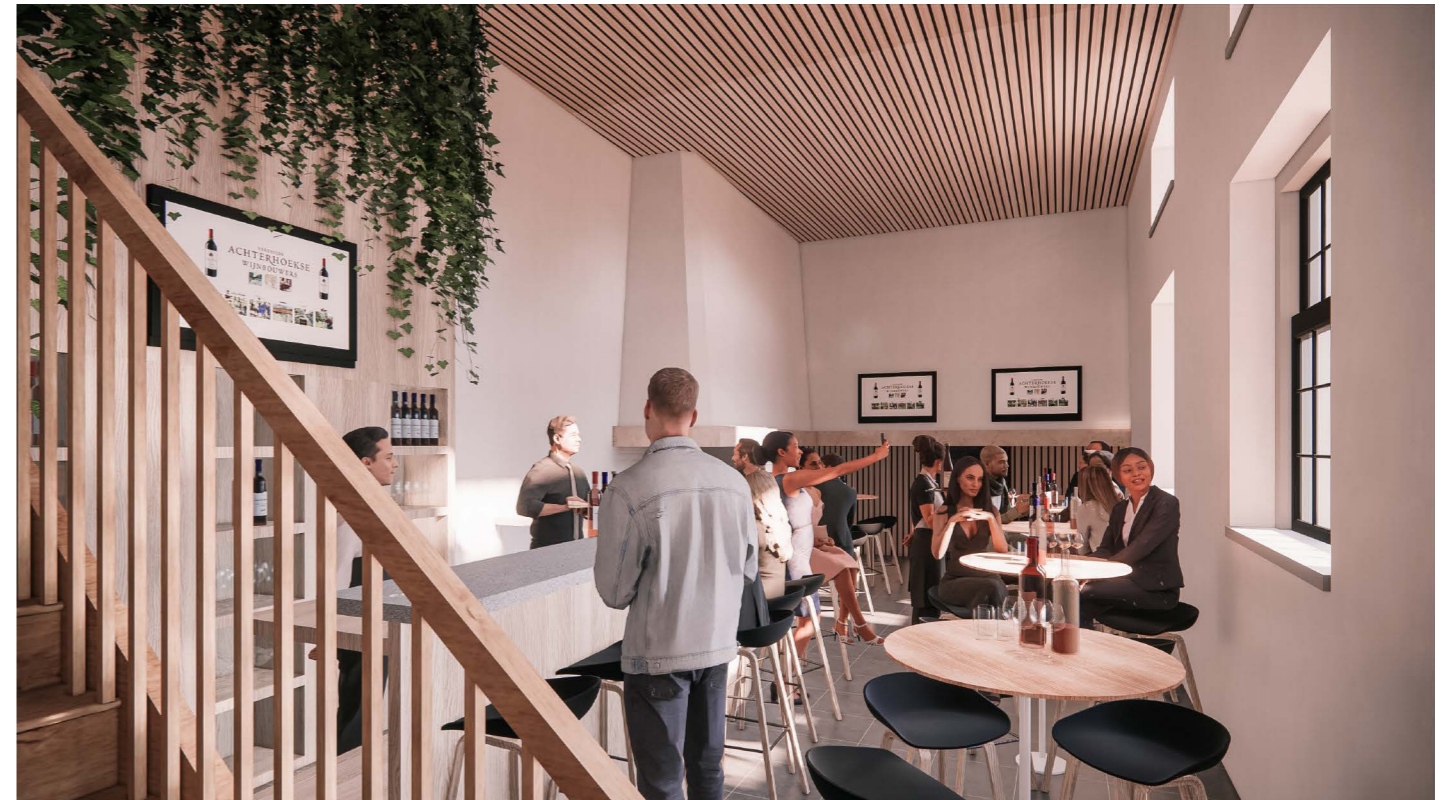
Old vaults



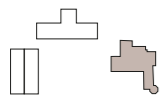
Wine cellar



Bar



Bar



GROUND FLOOR



(Van Asselt, 2021)



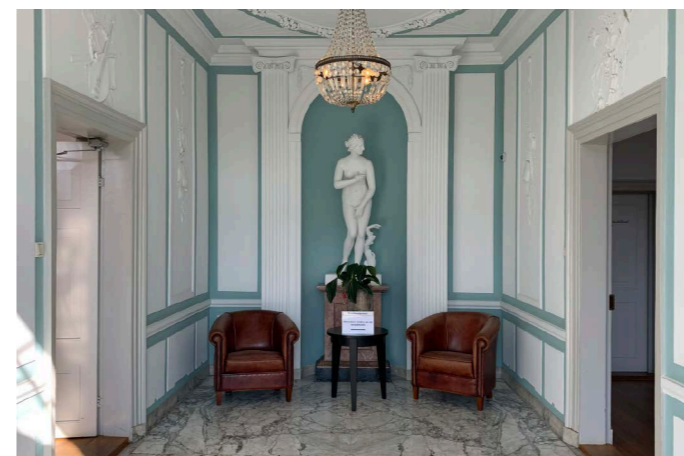
(Van Asselt, 2021)



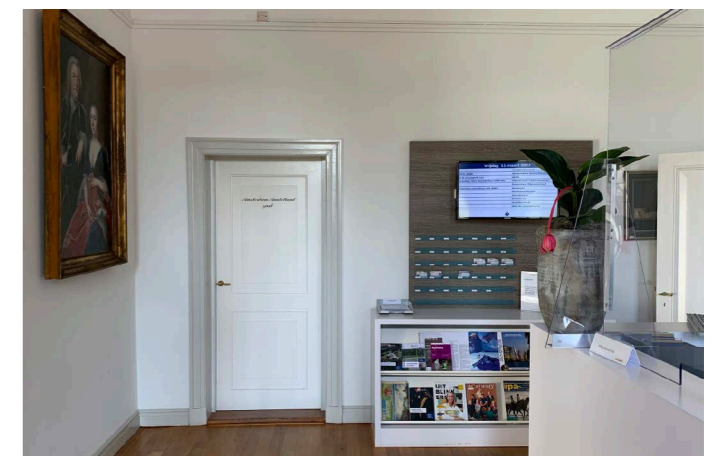
(Van Asselt, 2021)



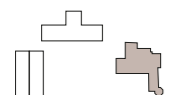
(Van Asselt, 2021)



(Van Asselt, 2021)



(Van Asselt, 2021)



RE-DESIGN

CURRENT SITUATION

GROUND FLOOR



Colors based on crests



Refined detailing



Family crests integrated



Restaurant



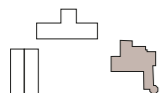
Restaurant



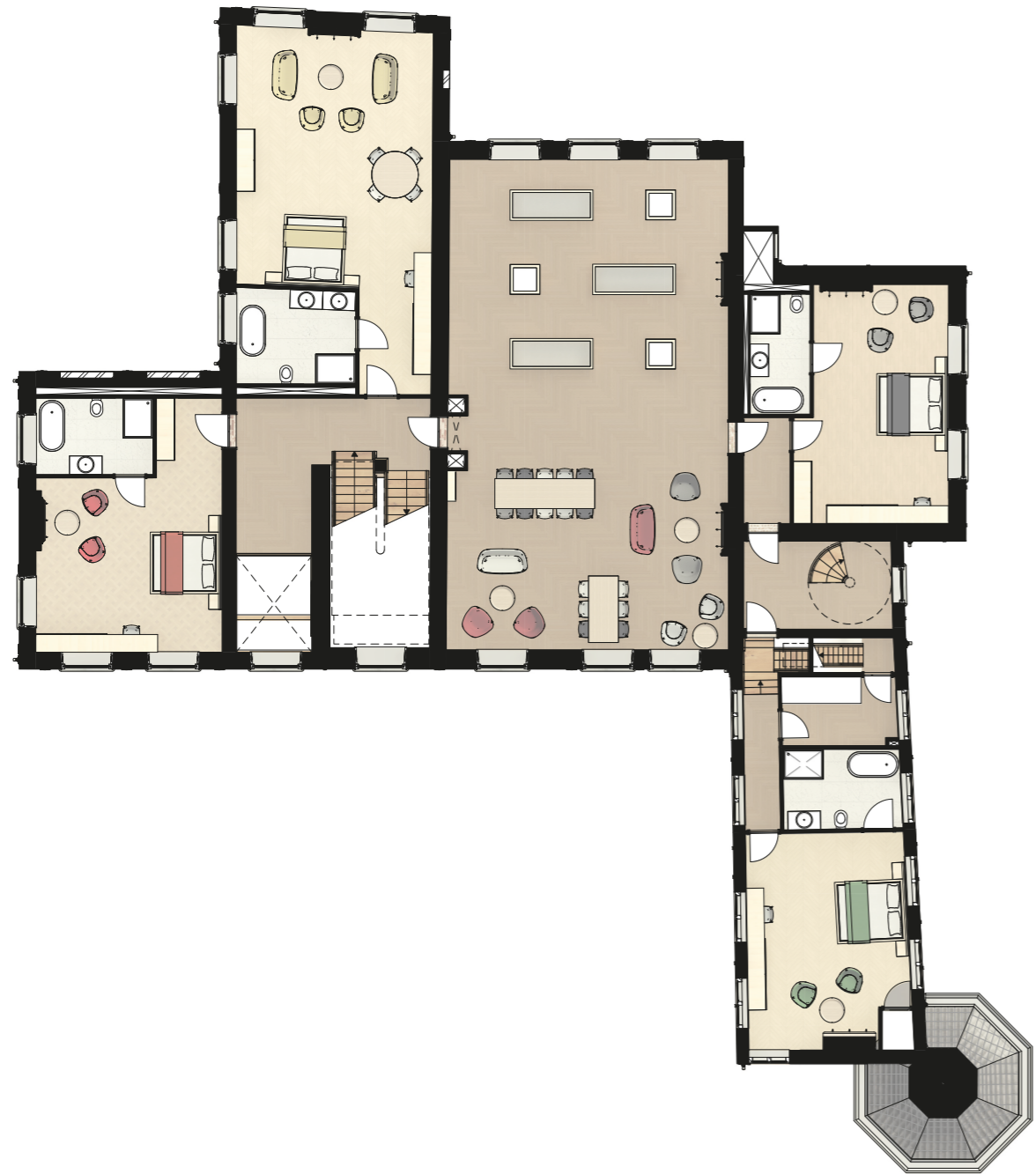
Van Dijk



Van Keppel



FIRST FLOOR



(Van Asselt, 2021)



(Van Asselt, 2021)



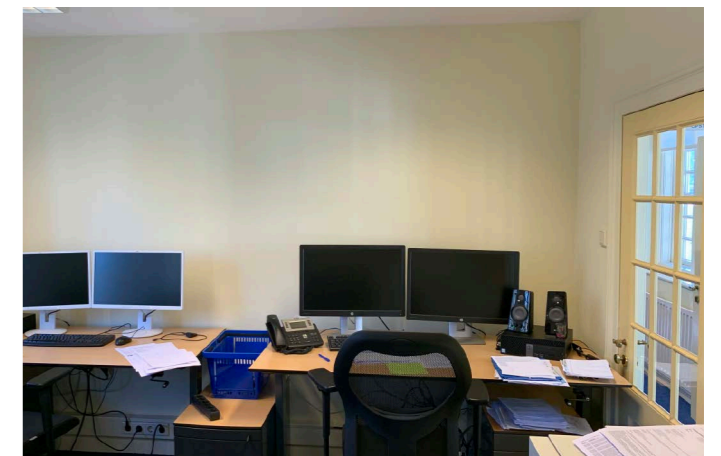
(Van Asselt, 2021)



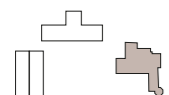
(Van Asselt, 2021)



(Van Asselt, 2021)



(Van Asselt, 2021)



RE-DESIGN

CURRENT SITUATION

FIRST FLOOR



Colors based on crests



Refined detailing



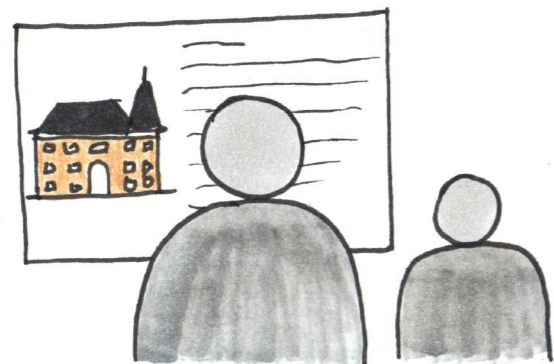
Family crests integrated



Exhibition space



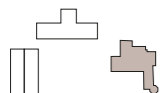
Living room



Typology exhibition



Lerinck



FIRST FLOOR



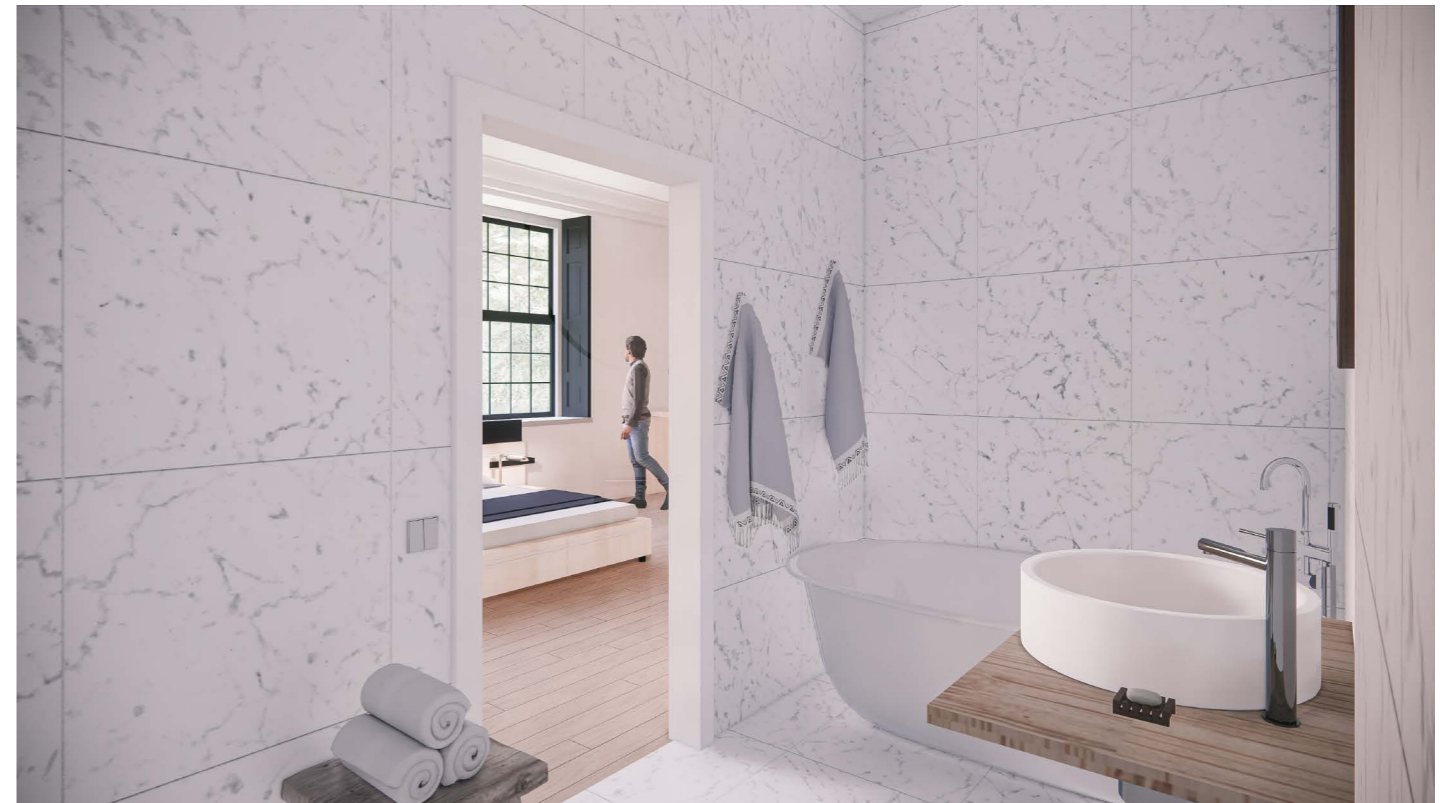
Colors based on crests



Refined detailing



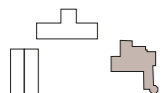
Family crests integrated



Van Heekeren



Schimmelpenninck van der Oye



SECOND FLOOR



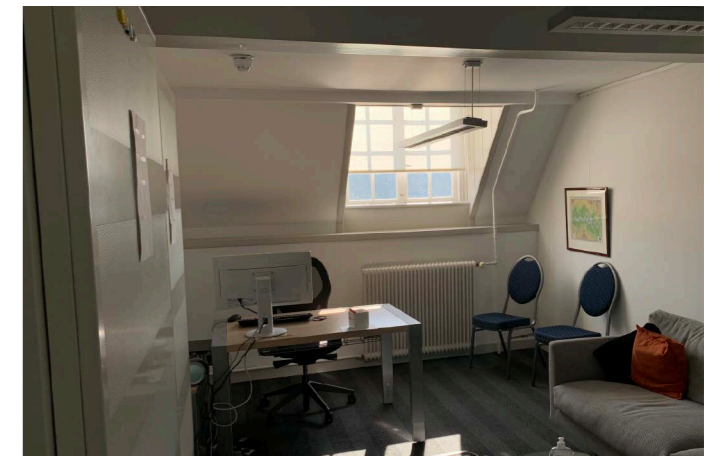
(Van Asselt, 2021)



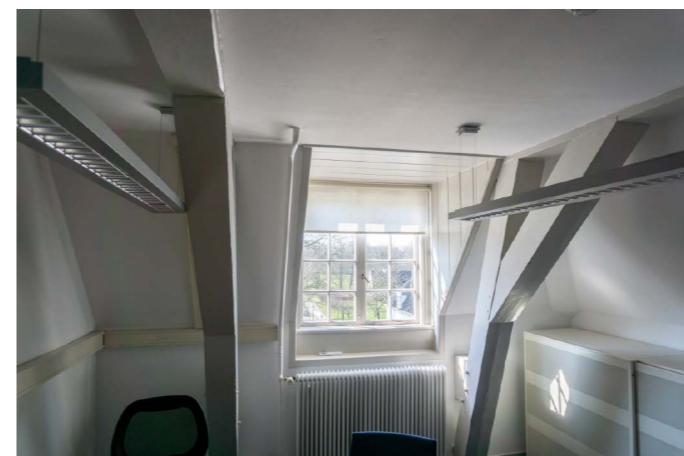
(Van Asselt, 2021)



(Van Asselt, 2021)



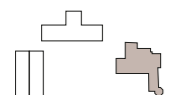
(Van Asselt, 2021)



(Van Asselt, 2021)



(Van Asselt, 2021)



RE-DESIGN

CURRENT SITUATION

SECOND FLOOR



Colors based on crests



Refined detailing



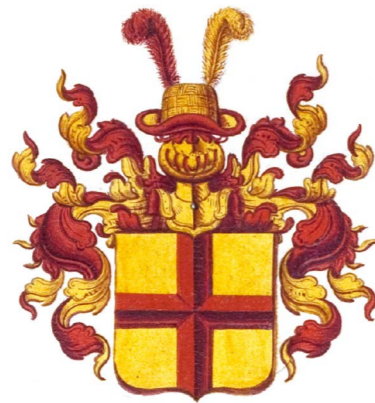
Family crests integrated



Hotel room



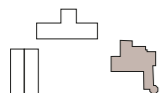
Hotel room

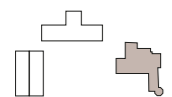
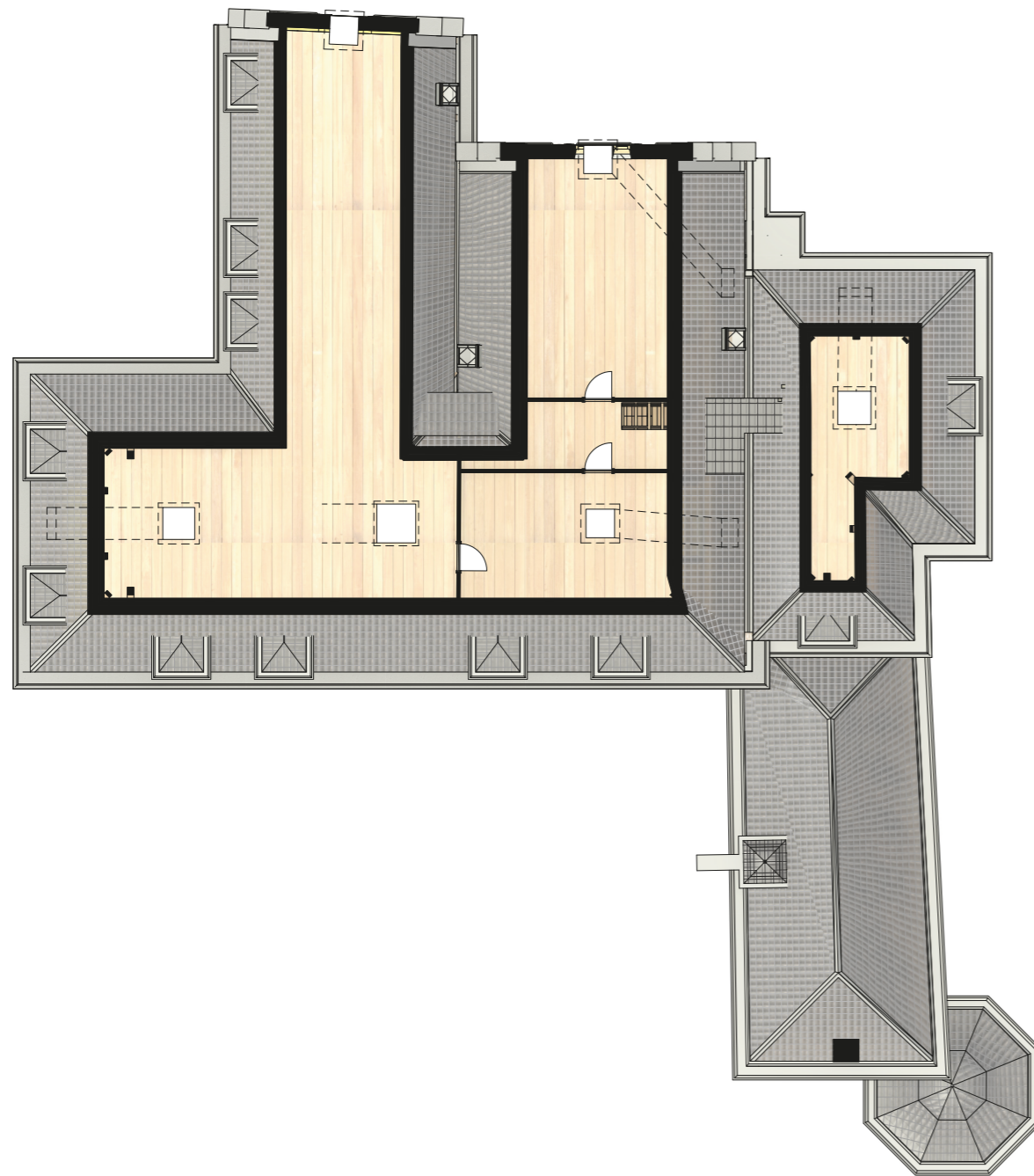


Van Heekeren



Van Keppel





RE-DESIGN

CURRENT SITUATION

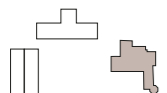
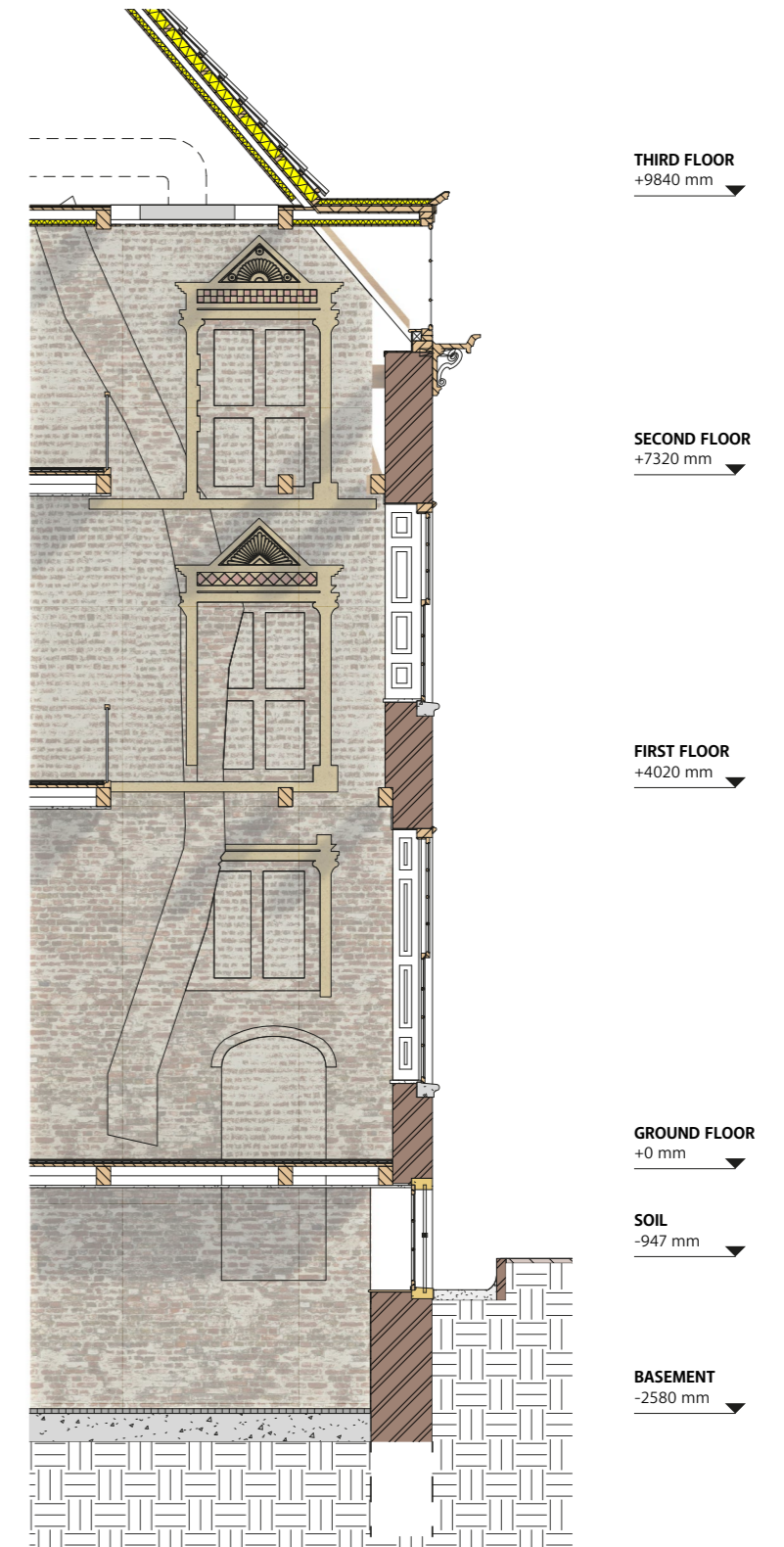
TIMELAYERS

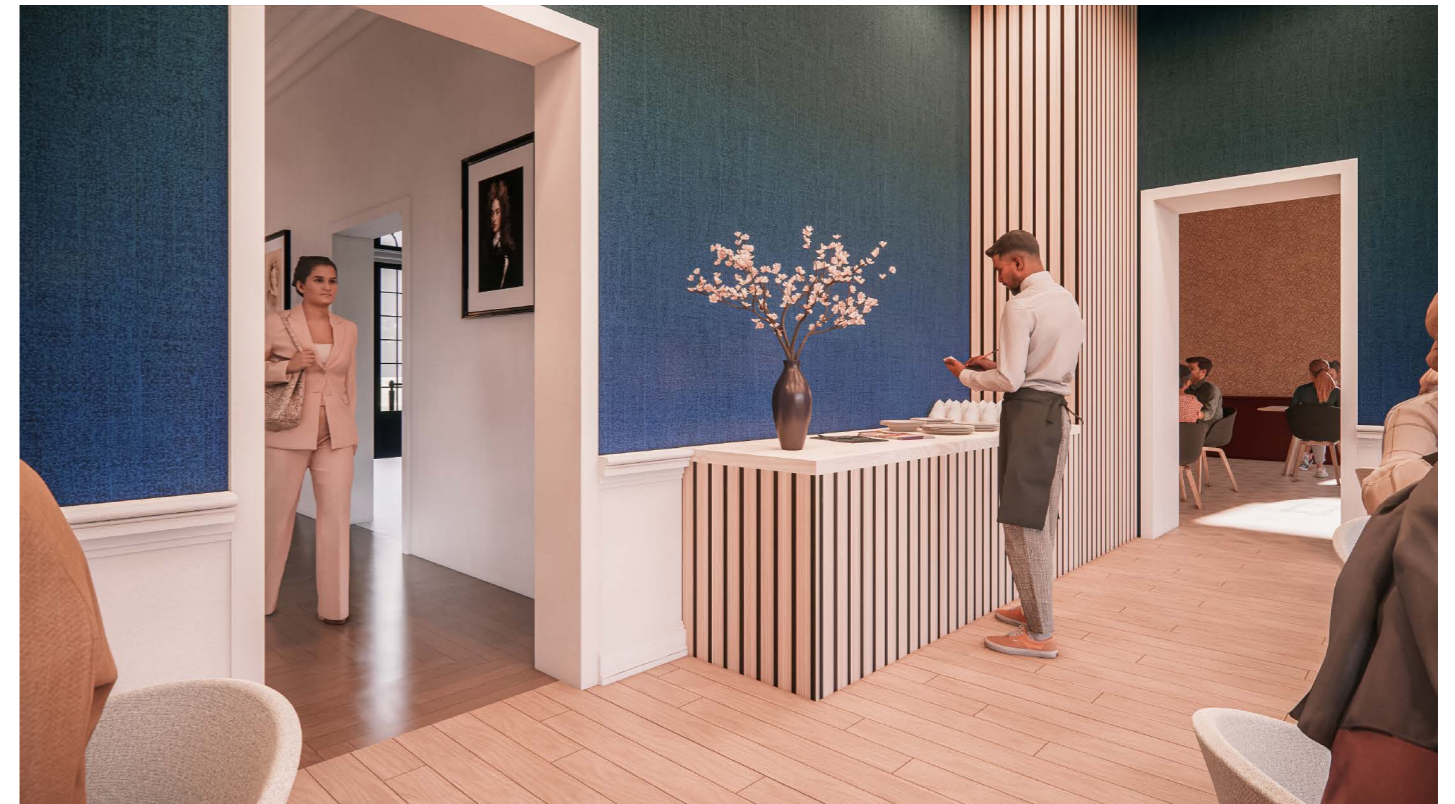
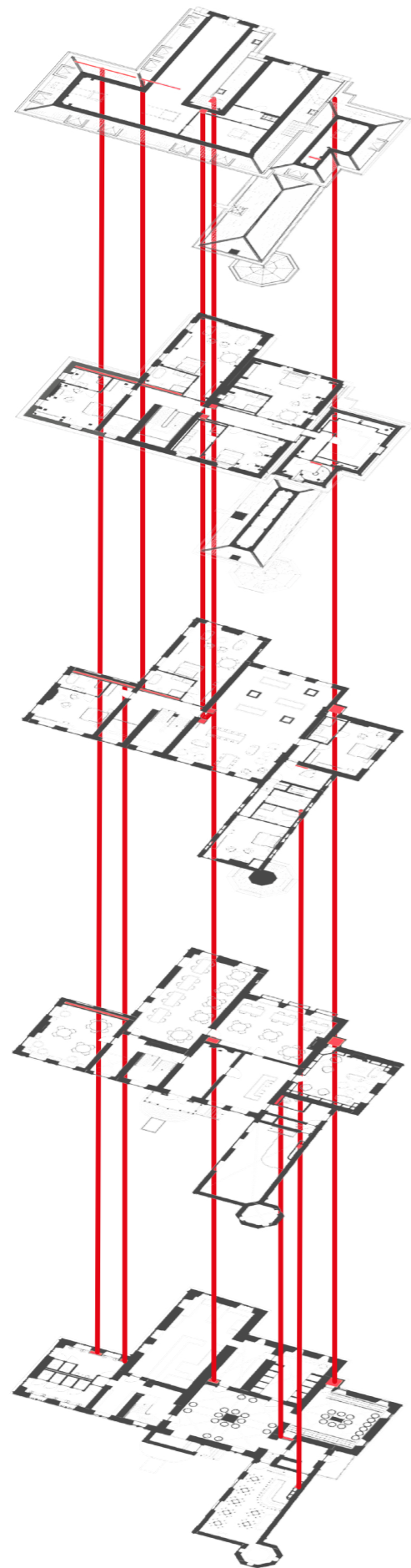


Ground floor

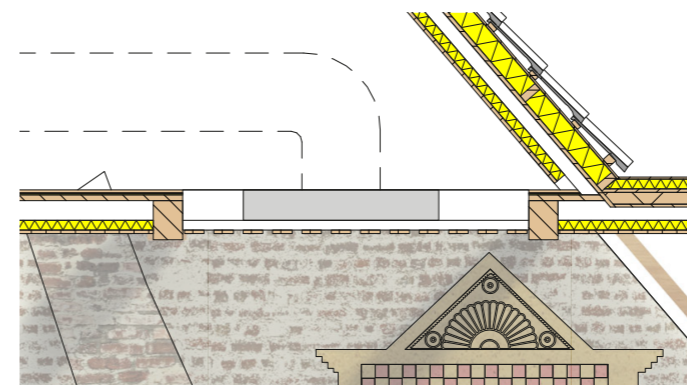


First floor





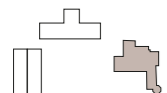
Built-in element restaurant



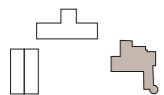
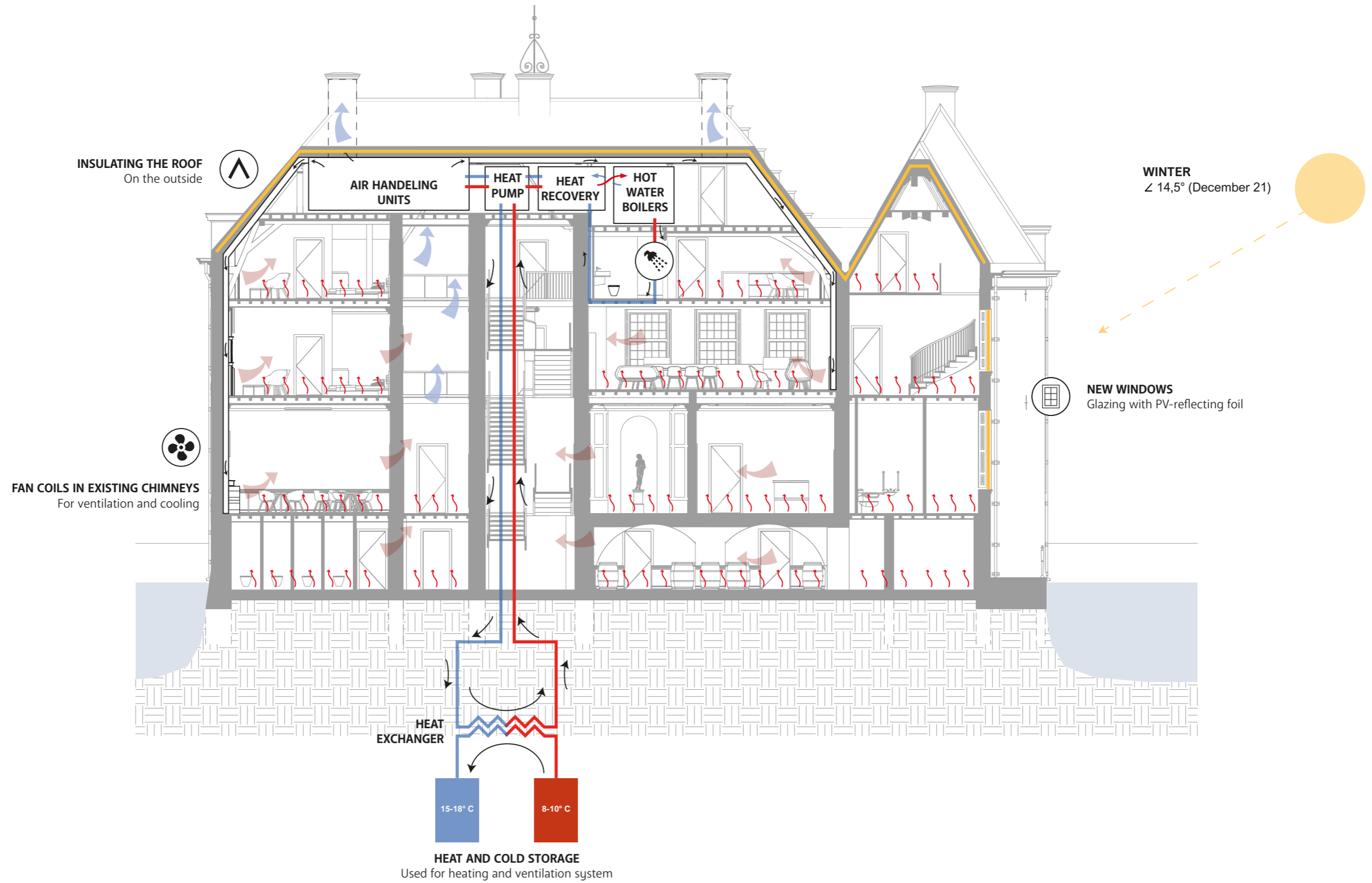
Grill in acoustic ceiling finish



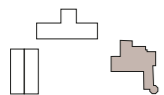
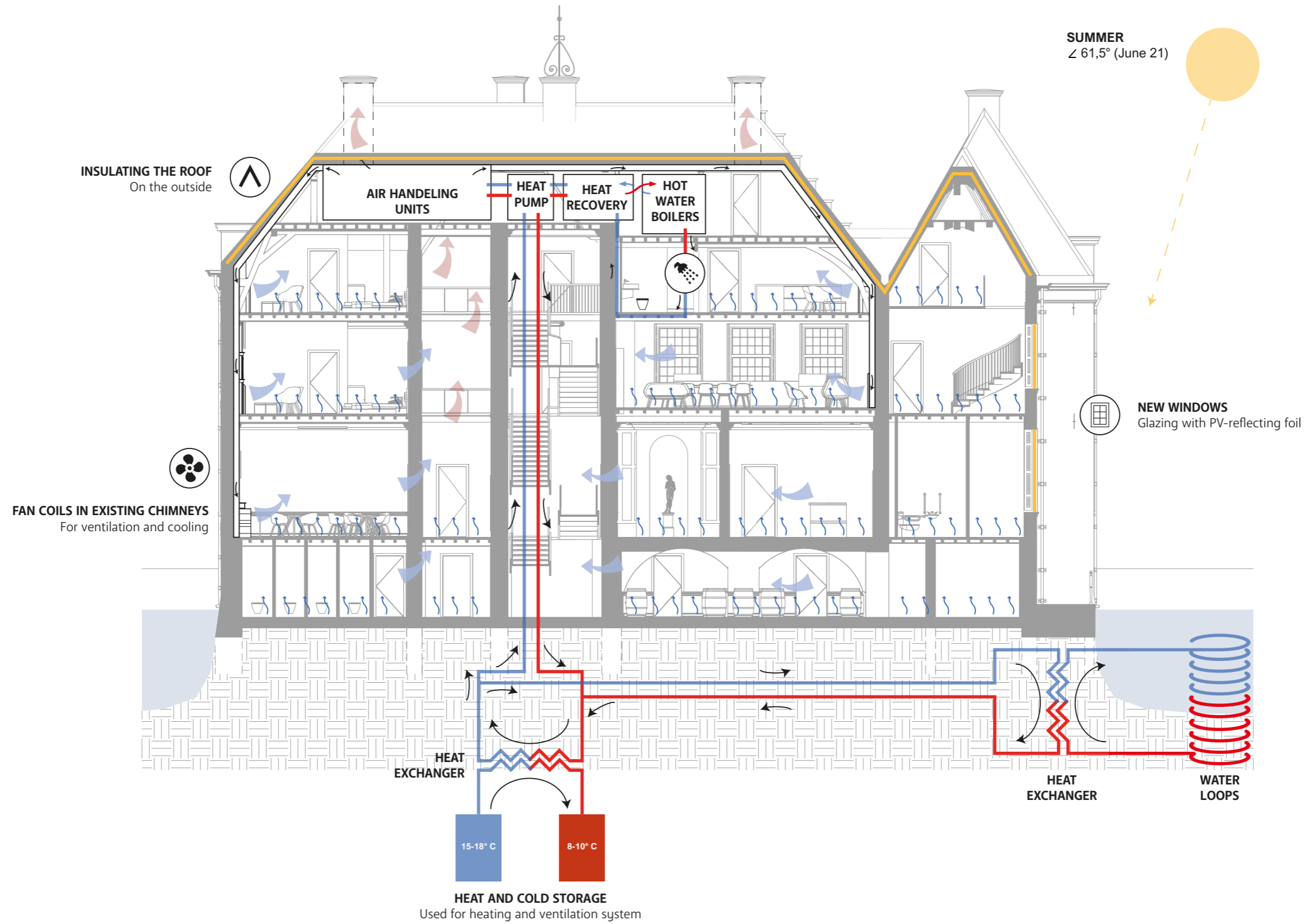
Retaining walls for plumbing- and ventilation pipes



CLIMATE SECTION WINTER SITUATION

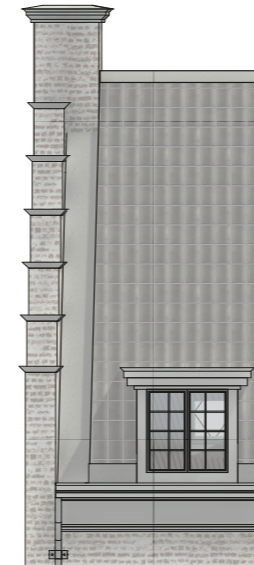


CLIMATE SECTION SUMMER SITUATION

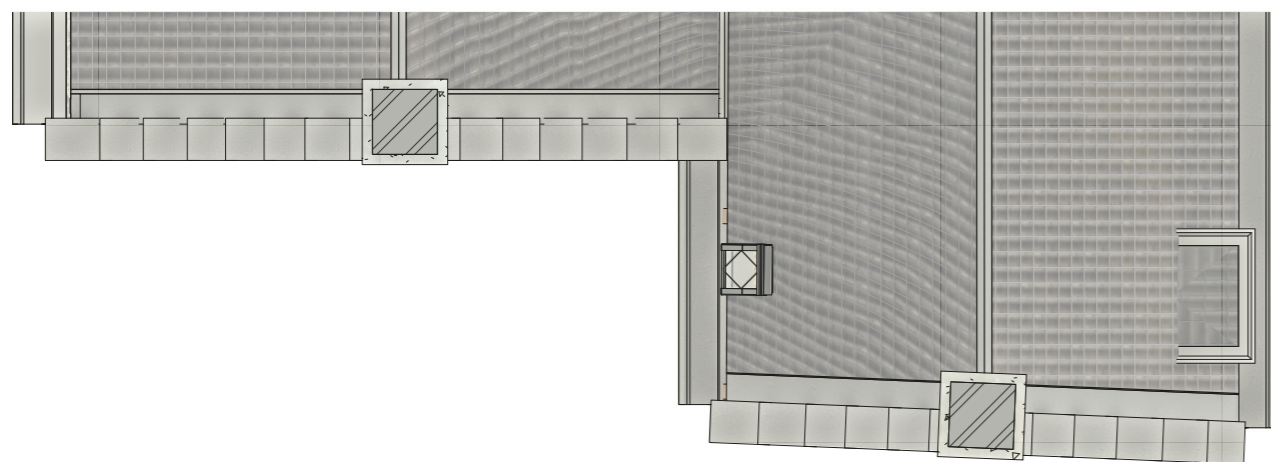




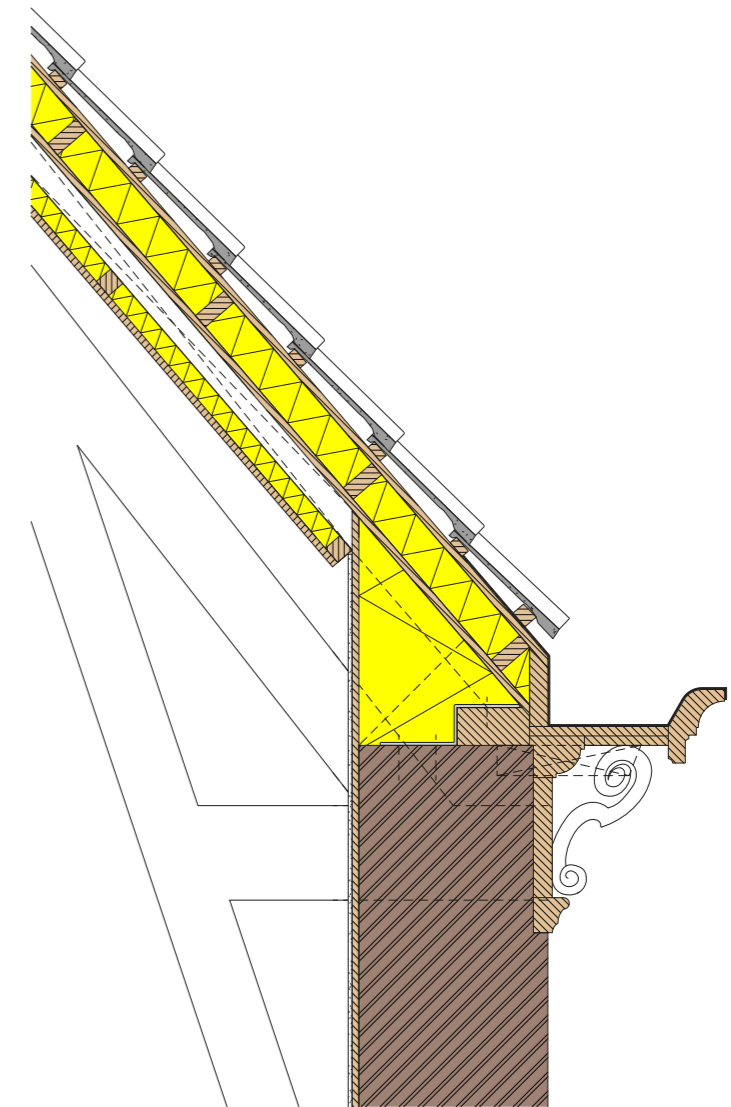
Front view gutter
stepped gable façade



Side view gutter
stepped gable façade

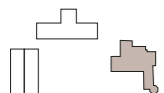


Top view gutter
stepped gable façade

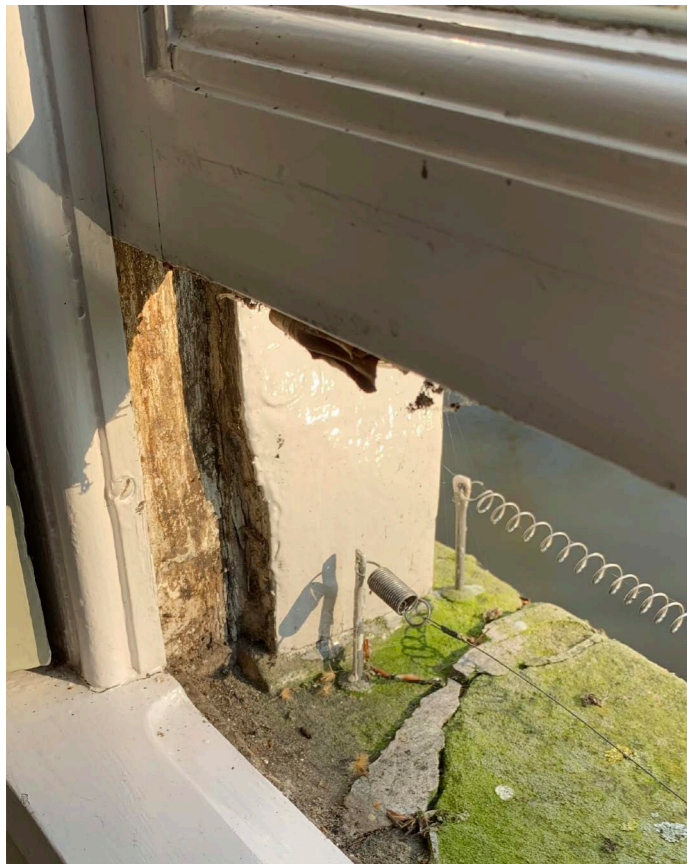


ROOF

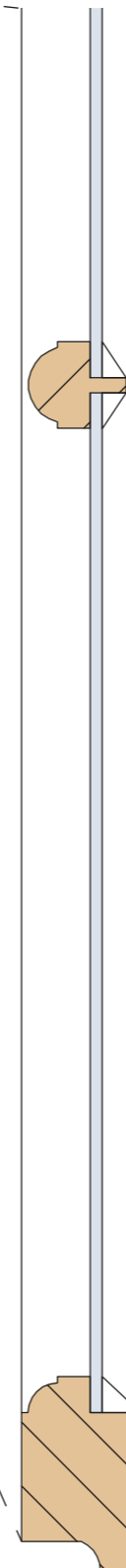
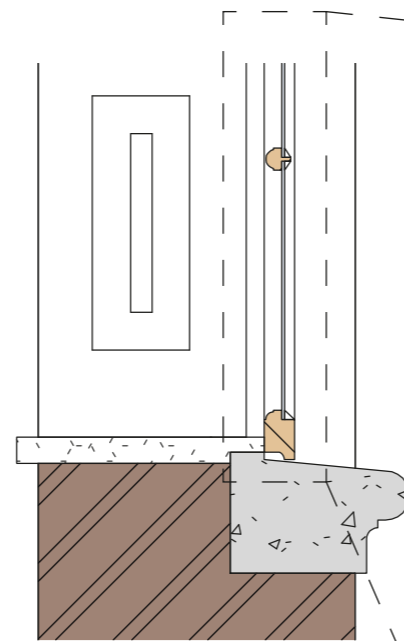
	<i>Exterior</i>	
Roof tiles	100	mm
Vapor permeable membrane (foil)	0	mm
Wooden plates (OSB)	10	mm
Insulation Isolgomma Roll 7	100	mm
Vapor barrier membrane (foil)	0	mm
Wooden plates (OSB)	20	mm
Air cavity and wooden framing	70	mm
Acoustic insulation	50	mm
Acoustic wooden finish (Groove)	18	mm
	<i>Interior</i>	
	Total	366 mm
	Rc-value ±5,24 m ² K/W	



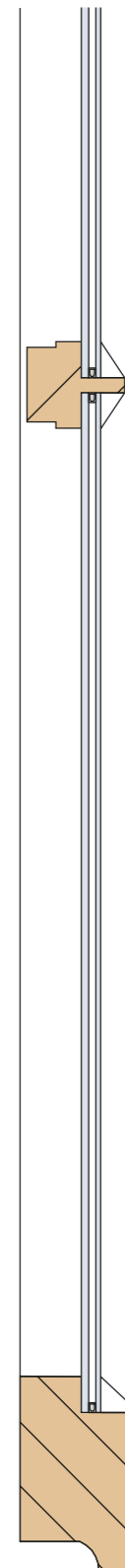
WINDOW FRAMES & GLAZING



EXISTING WINDOW(S) (FRAMES) IN BAD CONDITION



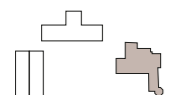
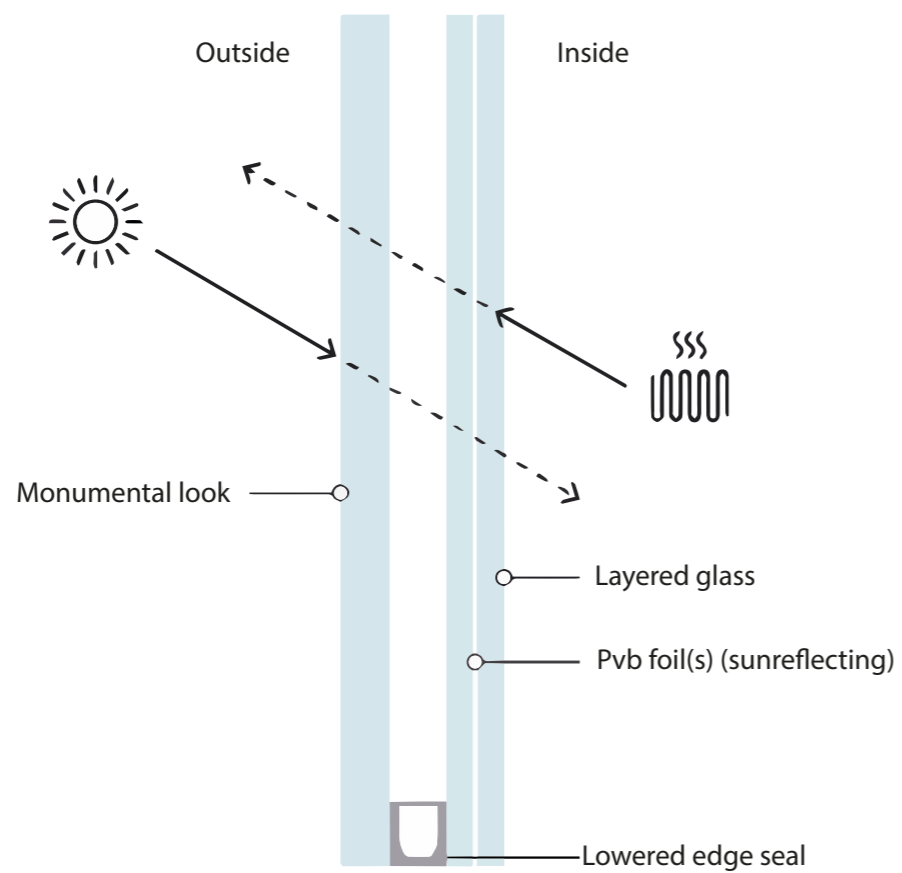
EXISTING

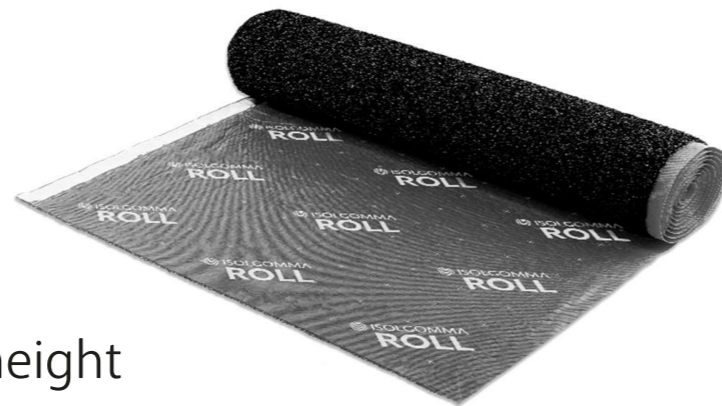
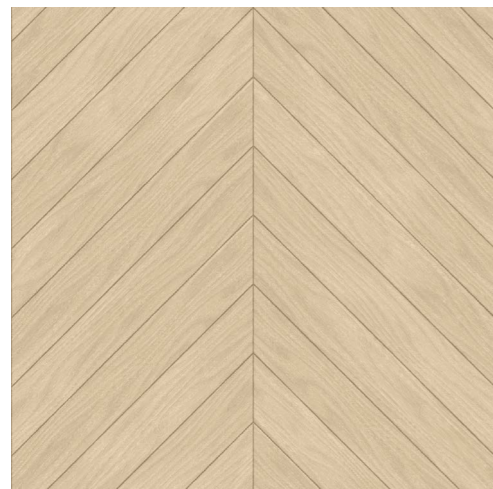
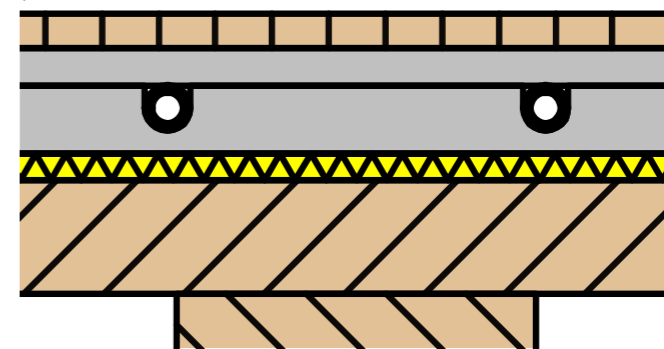
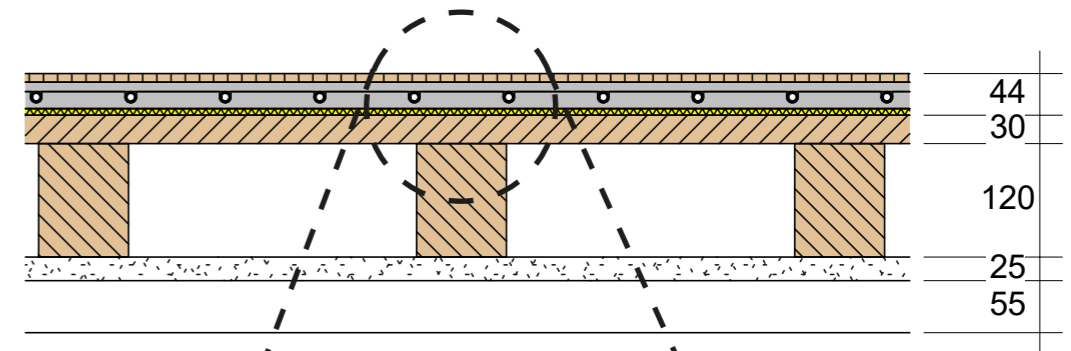
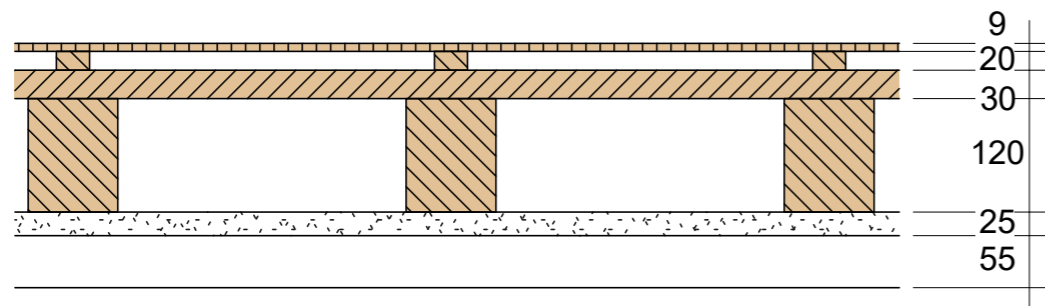


NEW

MONUGLAS MODERN ECO PROTECT

8mm in total
 U-value of 1,8 W/m2K
 Sun reflectand foil

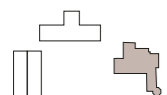




Dry floor heating system with wooden finishing only **15 mm** of additional height

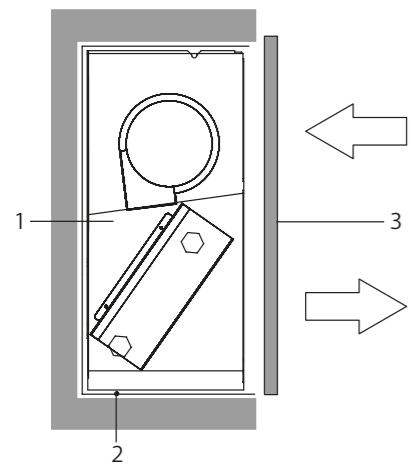
NEW FLOOR

	<i>Top</i>		
Oak wooden finish	9	mm	
Fermacell® gypsum fiber board	10	mm	
Fermacell® gypsum fiber board with floor heating pipes	18	mm	
Insulation Isolomma Roll 7	7	mm	
Existing wooden paneling			
Existing wooden construction			
	<i>Bottom</i>		
	Total	44	mm



Western Aertesi ZEFIRO

Fancoil type VG847 (upside down)



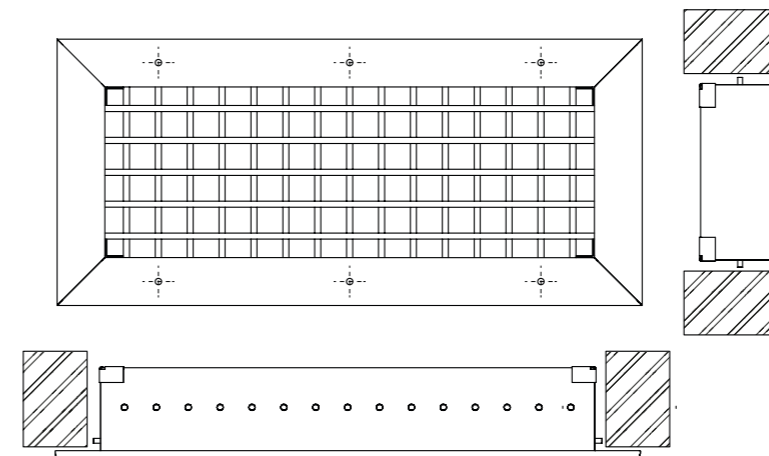
- 1. VG Fancoil unit
- 2. CCM-VG Built-in casing
- 3. MPK-VG Metal covering panel with grills

Concealed vertical with frontal bottom outlet and frontal top inlet
1038 x 460 x 217 mm

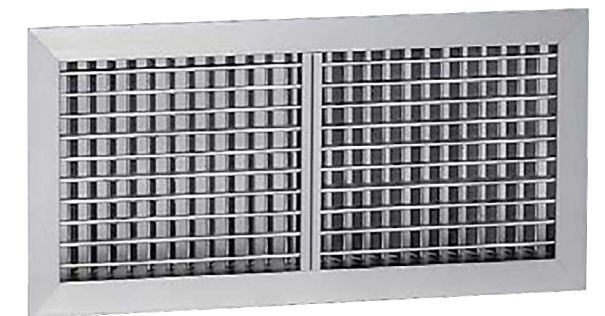


Solid Air WUCAOO

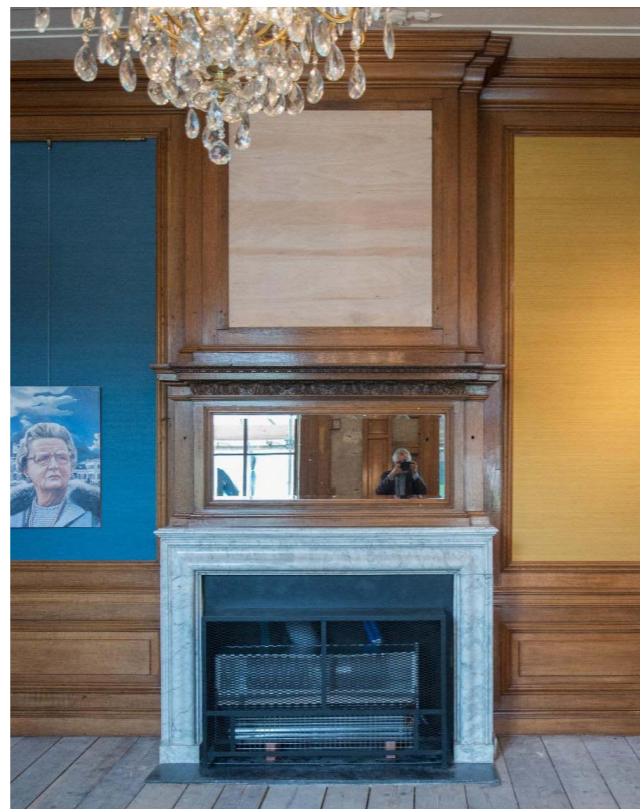
Wall grill with adjustable slats (both horizontally and vertically)



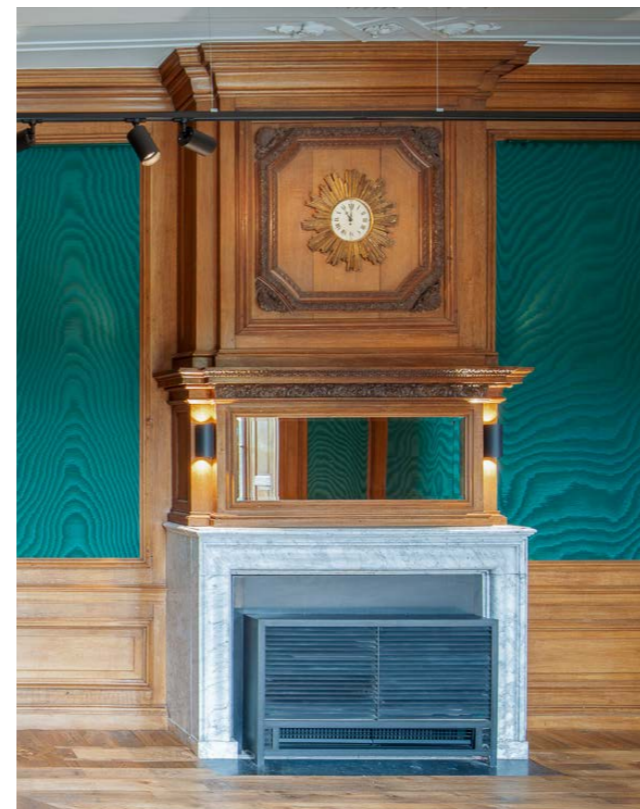
WUCAOO
1025 x 125 mm
32mm frame



(Verlaan & Bouwstra, 2015)



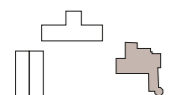
(Verlaan & Bouwstra, 2015)



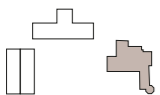
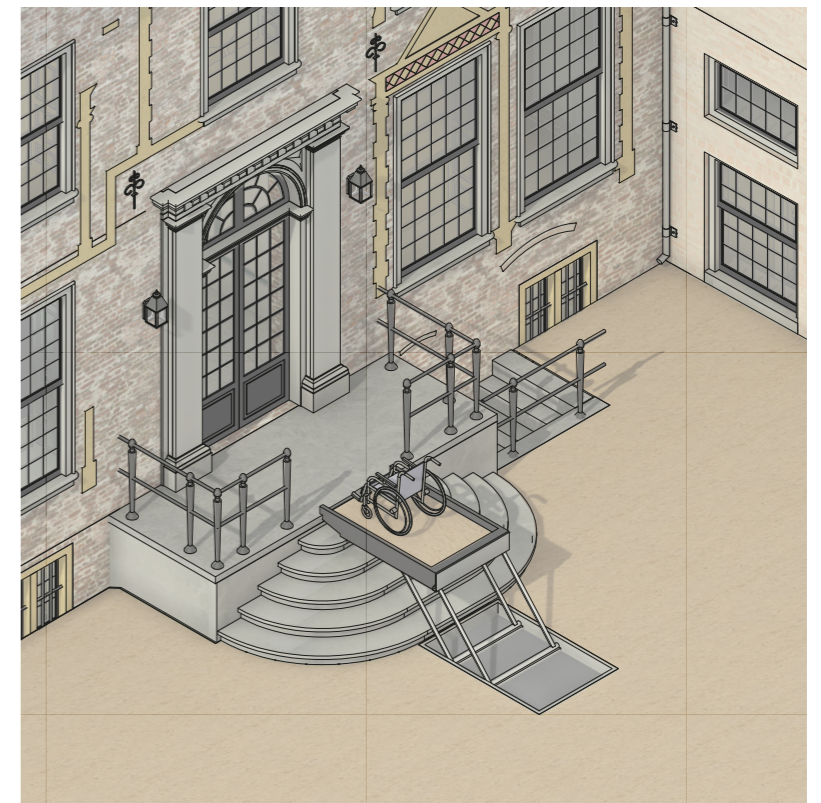
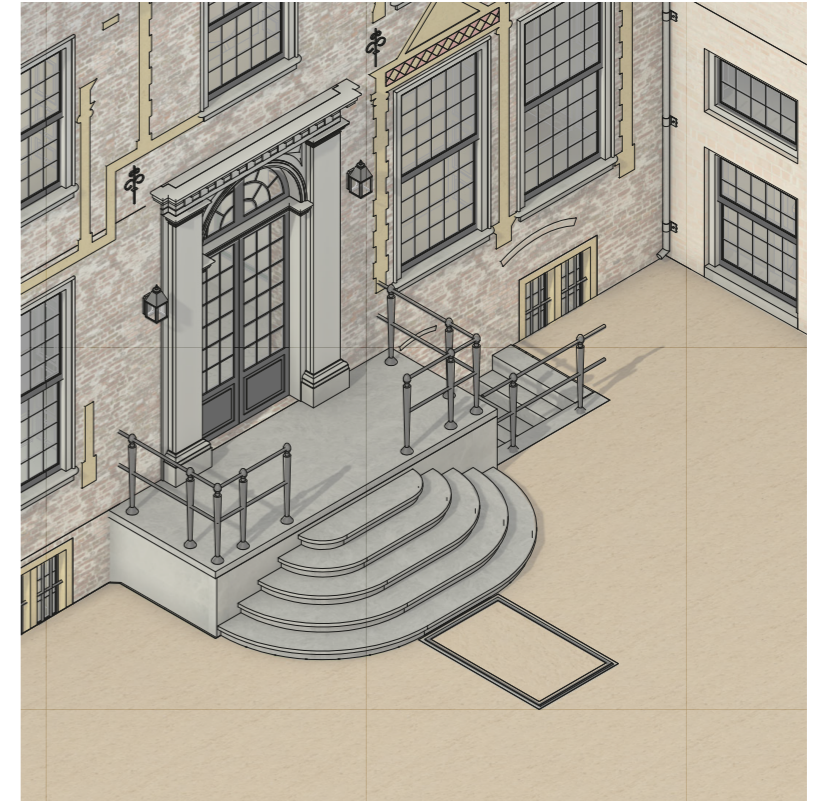
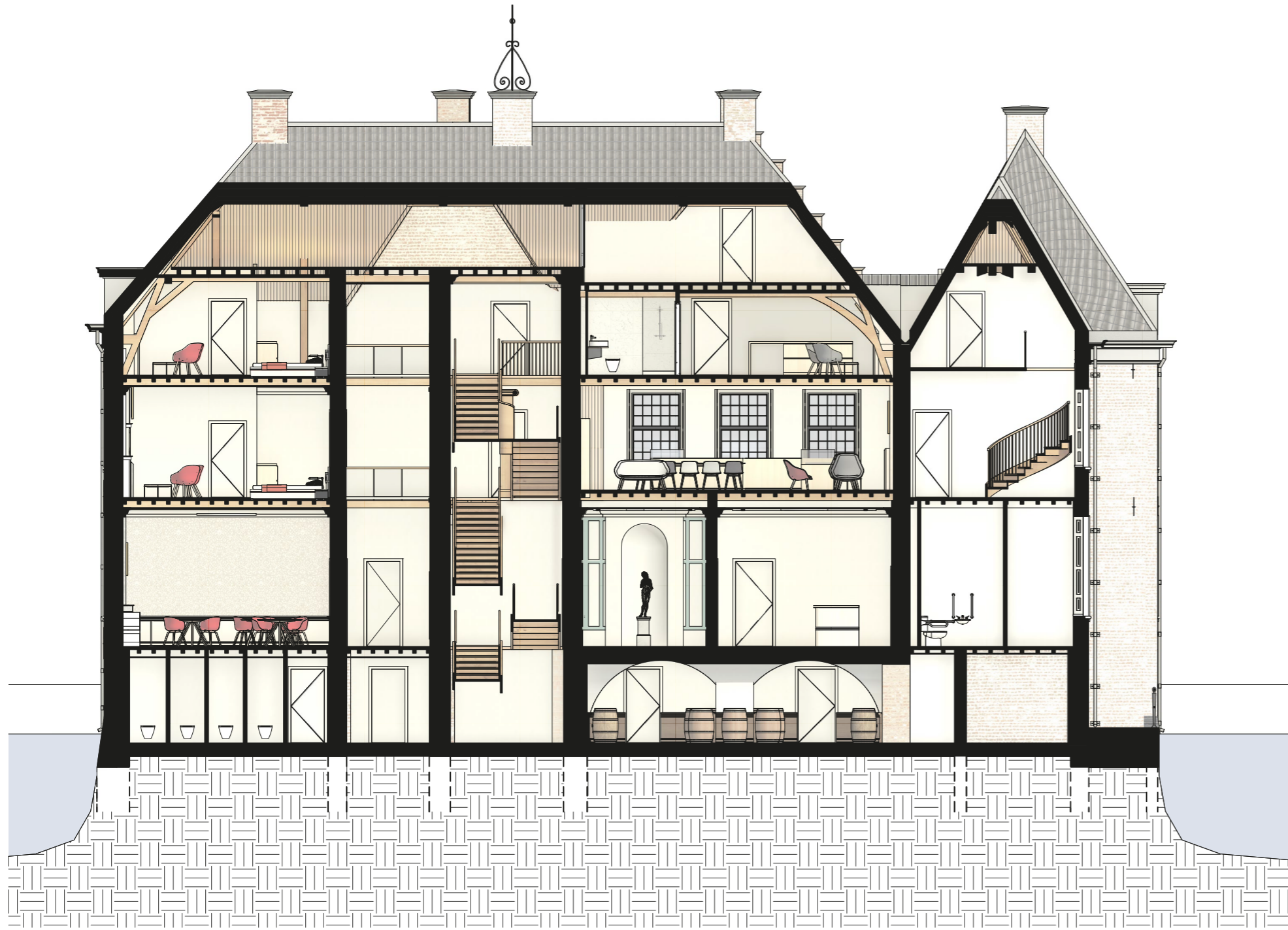
(Oostendorp stoffering, 2017)



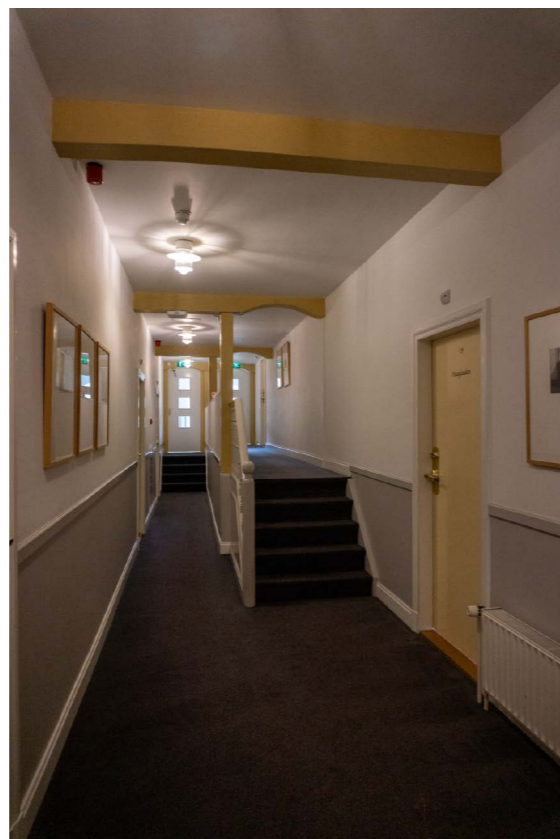
(Verlaan & Bouwstra, 2017)



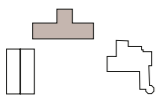
ACCESSIBILITY



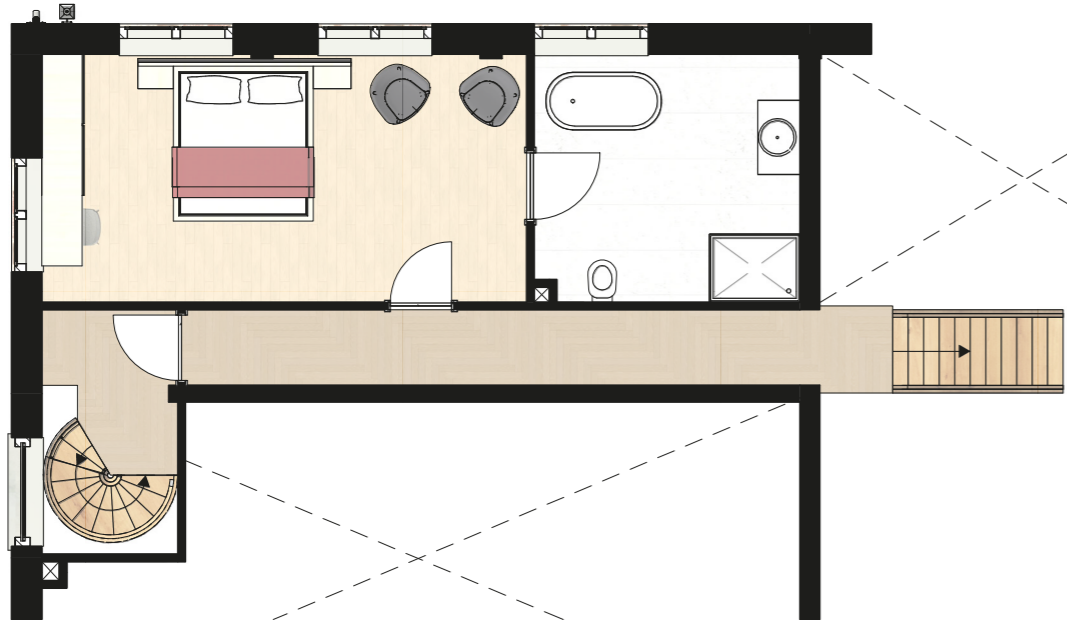
COACH HOUSE GROUND FLOOR



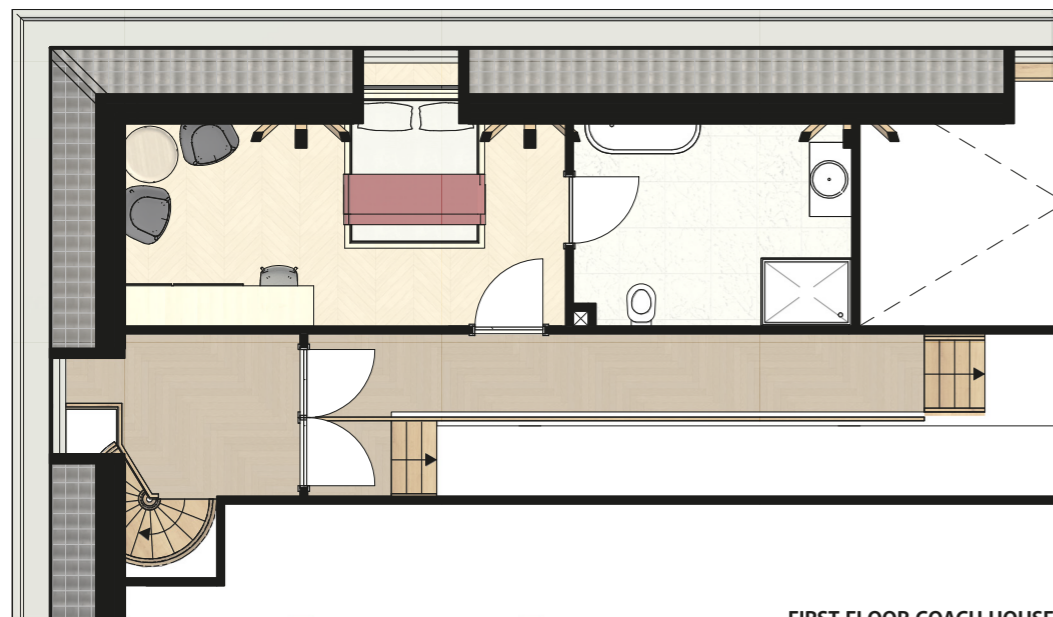
GROUND FLOOR COACH HOUSE



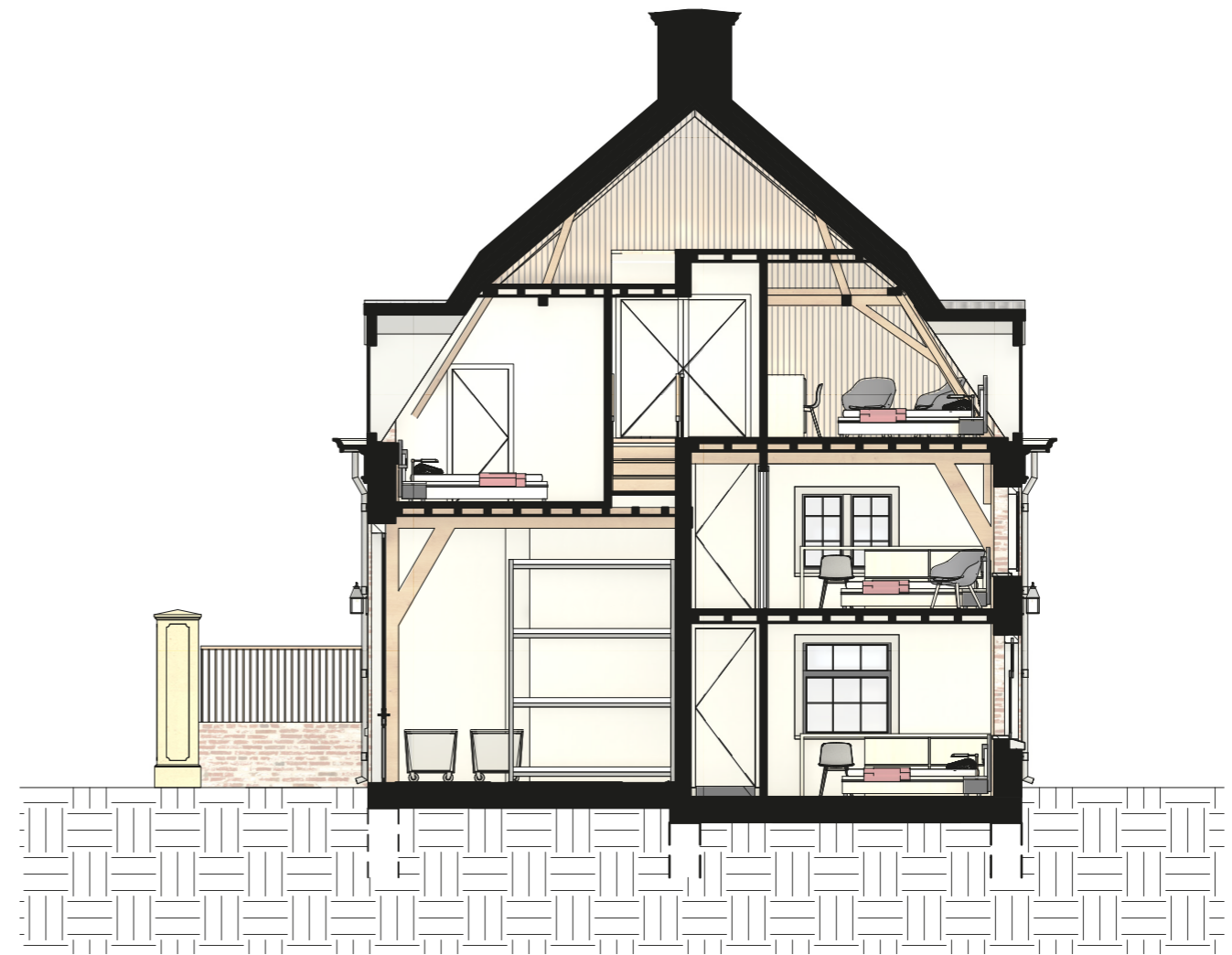
COACH HOUSE SPLIT FLOORS



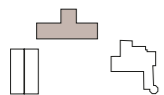
GROUND FLOOR COACH HOUSE



FIRST FLOOR COACH HOUSE



CROSS SECTION COACH HOUSE



COACH HOUSE UPPER FLOORS



Hotel room coach house



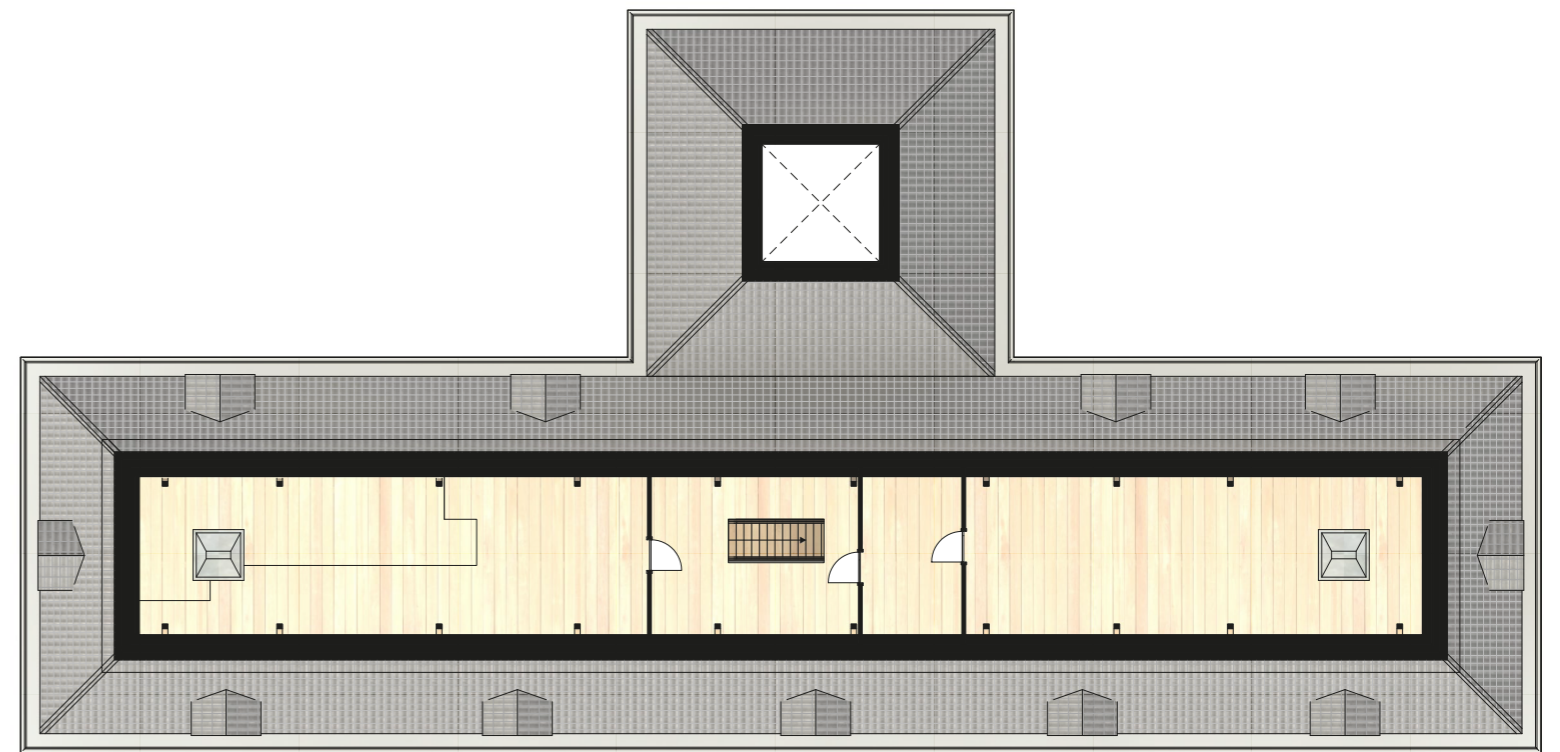
FIRST FLOOR COACH HOUSE



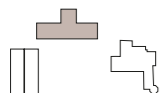
Attic coach house



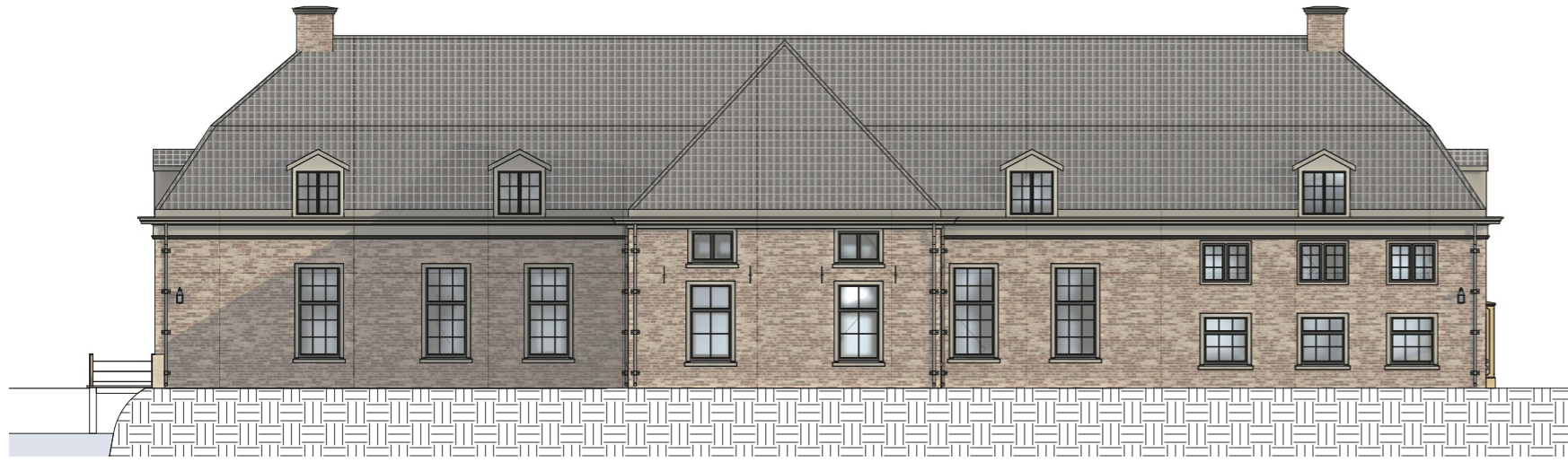
Attic coach house



SECOND FLOOR COACH HOUSE



CARRIAGE BUILDING ELEVATIONS



North façade

0 5 M



East façade

0 5 M



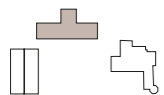
South façade

0 5 M



West façade

0 5 M



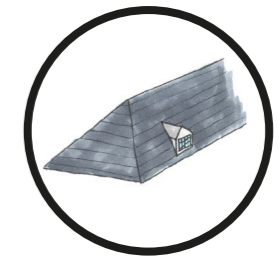
CHARACTERISTICS OF THE BUILDING TYPOLOGY



South façade new building



DETAILED ROOF EDGES



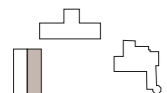
HIPPED ROOFS WITH DORMERS

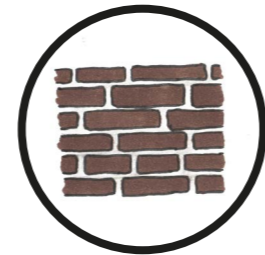


South façade coach house



Central square estate





BRICKWORK FAÇADE

WasteBasedBricks®
Orange

Impact Calculator

Calculate your impact

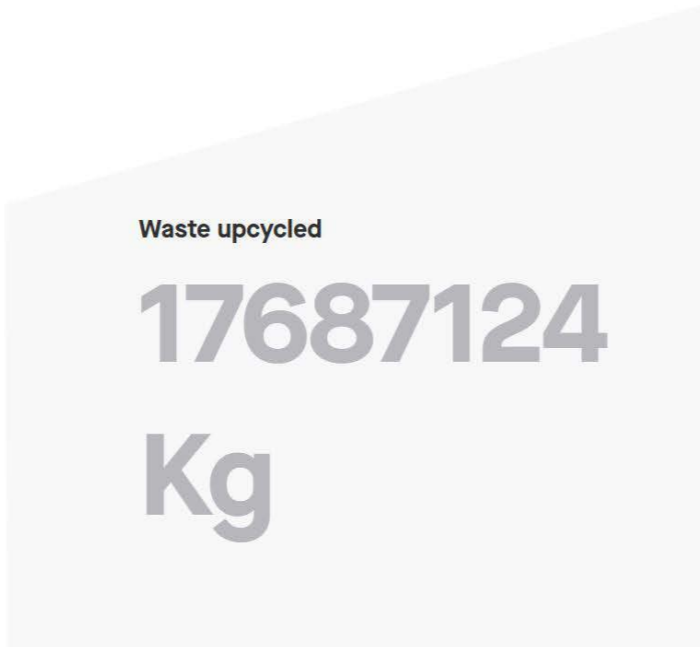
What would be your positive impact on our planet if you choose StoneCycling's WasteBasedBricks® for your next project?

Project size in m²

194364

Calculate

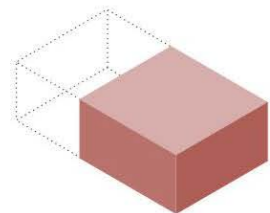
Or choose one of our example projects to learn about the impact.



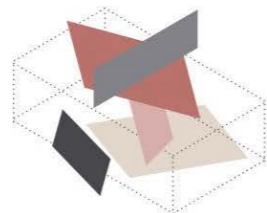
Central square estate



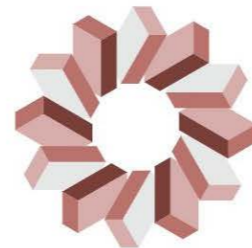
Central square estate



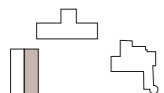
Made from at least 60% waste



91 kg waste per m2 upcycled



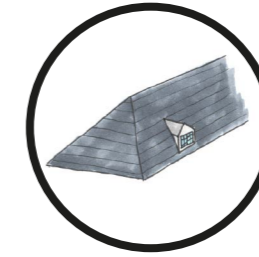
CO2 compensated production



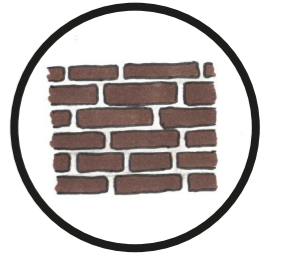
CHARACTERISTICS OF THE BUILDING TYPOLOGY



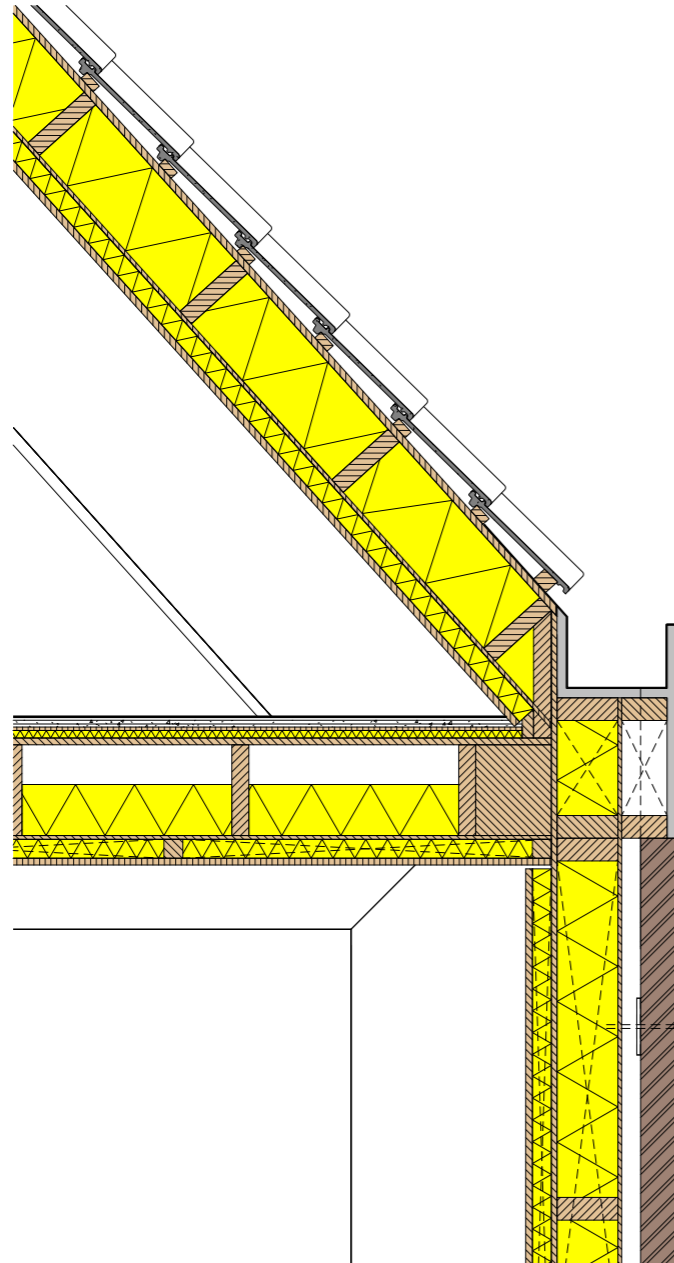
DETAILED ROOF EDGES



HIPPED ROOFS WITH DORMERS



BRICKWORK FAÇADE



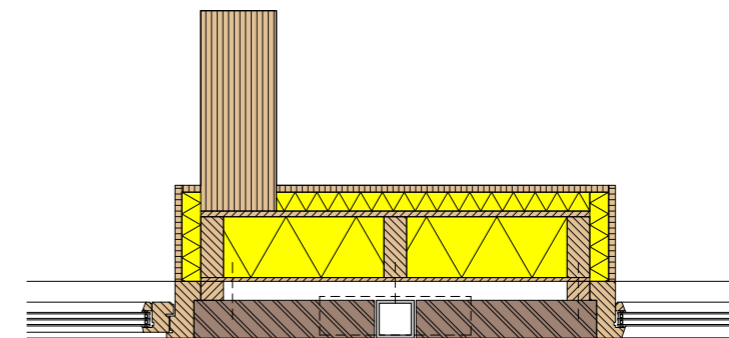
Vertical section

FAÇADE

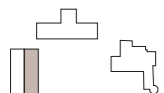
	<i>Exterior</i>	
Brickwork	100	mm
Cavity	50	mm
Vapor permeable membrane (foil)	0	mm
Wooden plates (OSB)	10	mm
Insulation Isover Systemroll 1000	161	mm
Vapor barrier membrane (foil)	0	mm
Wooden plates (OSB)	12	mm
Acoustic insulation	50	mm
Acoustic wooden finish (Groove)	18	mm
<i>Interior</i>		
Total	401	mm
Rc-value	±6,82 m²K/W	

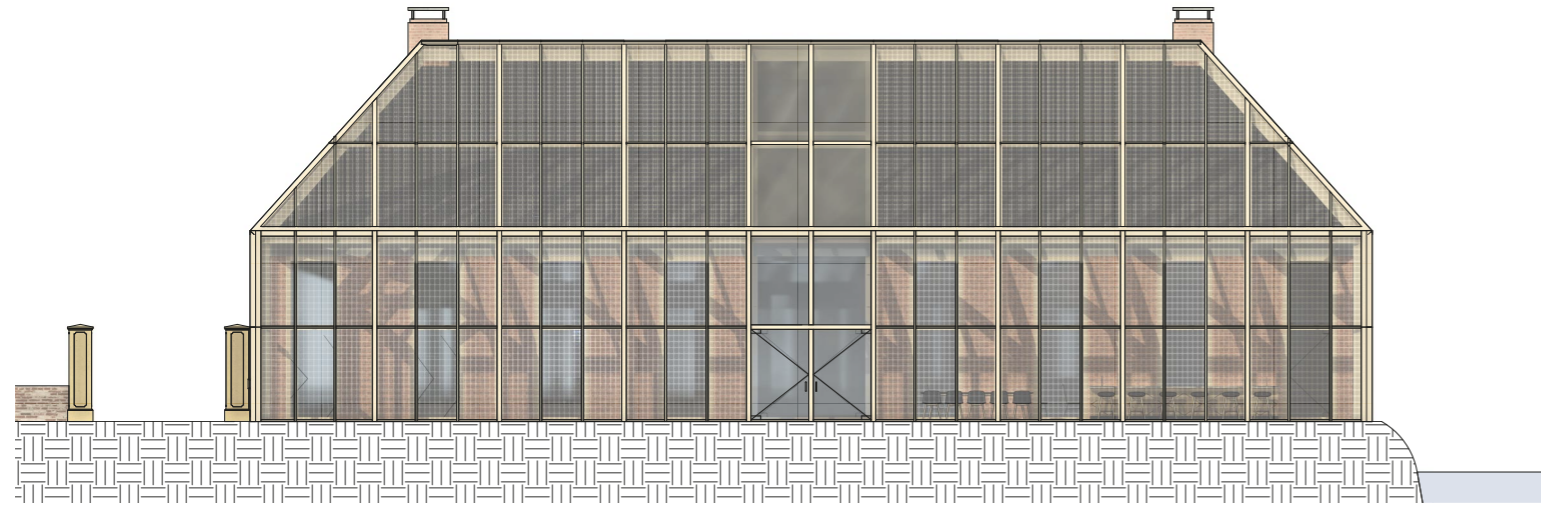
ROOF

	<i>Exterior</i>	
Roof tiles	100	mm
Vapor permeable membrane (foil)	0	mm
Wooden plates (OSB)	18	mm
Insulation Isover Systemroll 1000	210	mm
Vapor barrier membrane (foil)	0	mm
Wooden plates (OSB)	10	mm
Acoustic insulation	50	mm
Acoustic wooden finish (Groove)	18	mm
<i>Interior</i>		
Total	406	mm
Rc-value	±8,34 m²K/W	

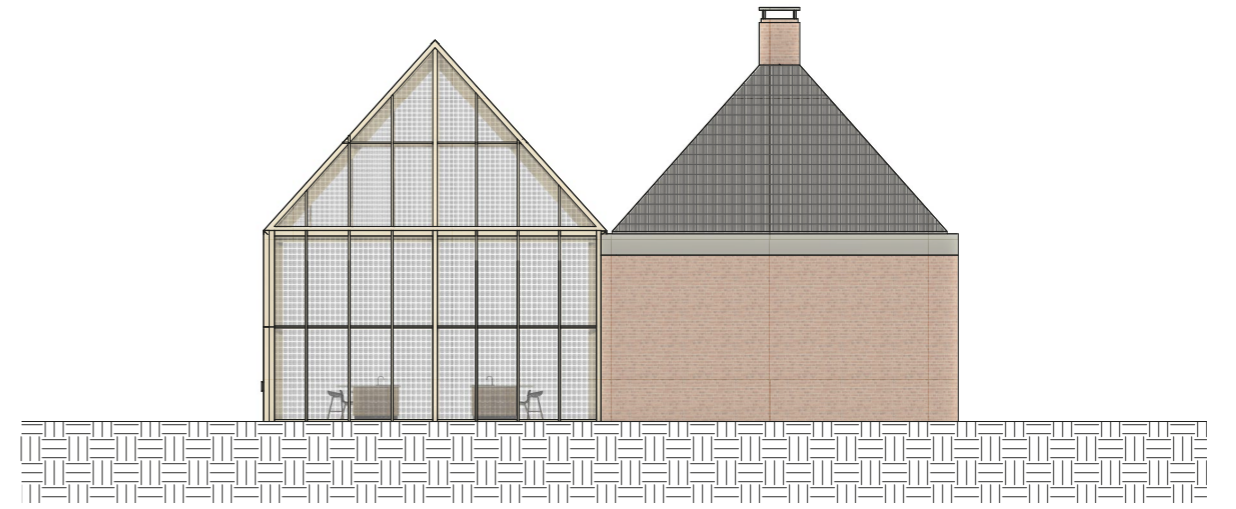


Horizontal section

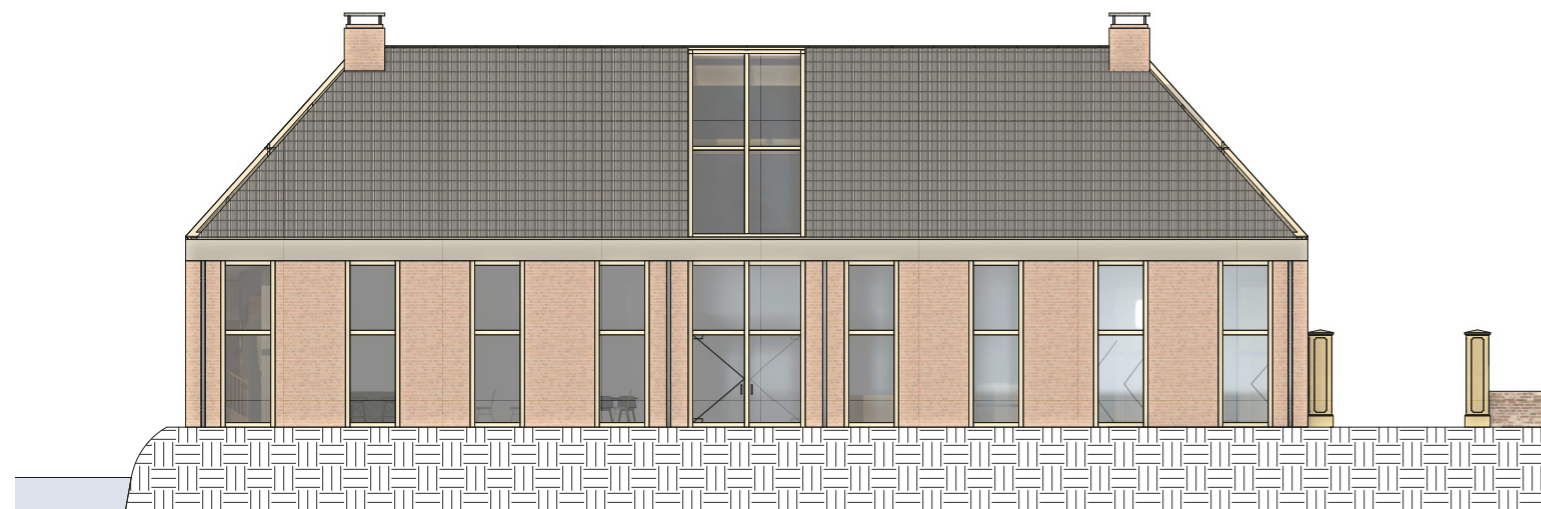




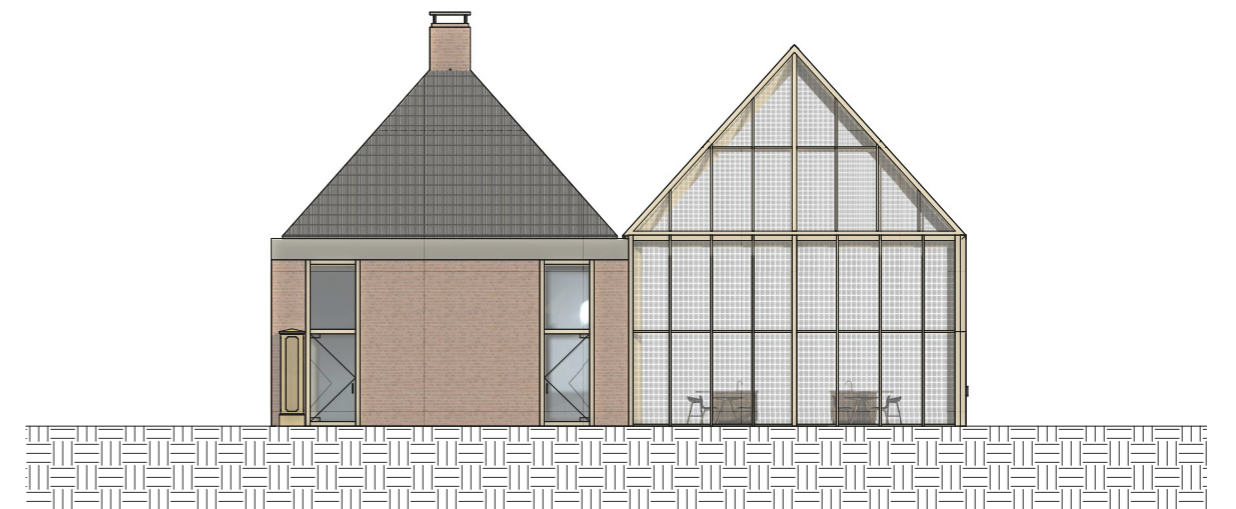
North façade



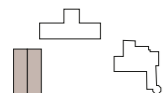
East façade

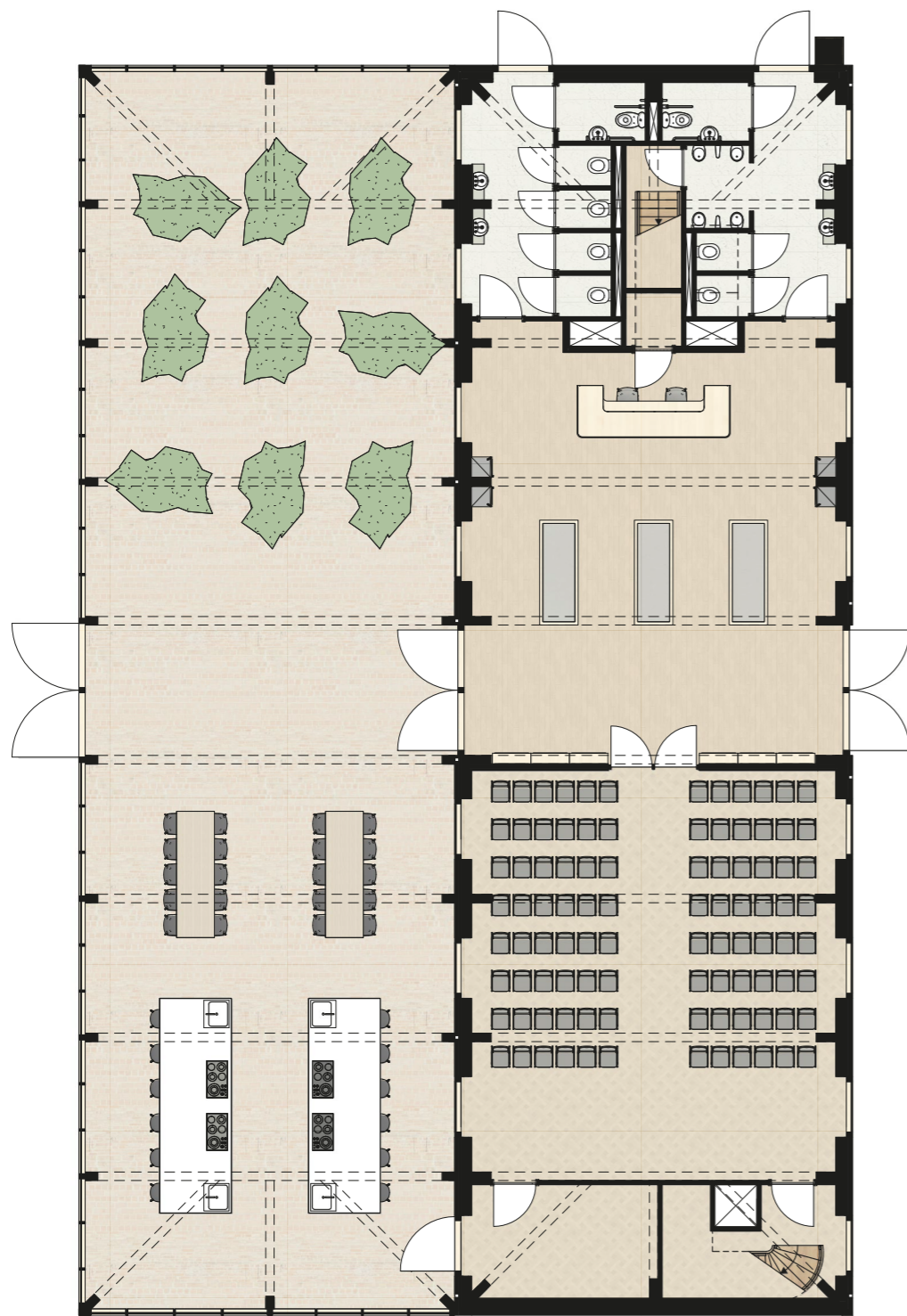


South façade

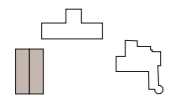


West façade

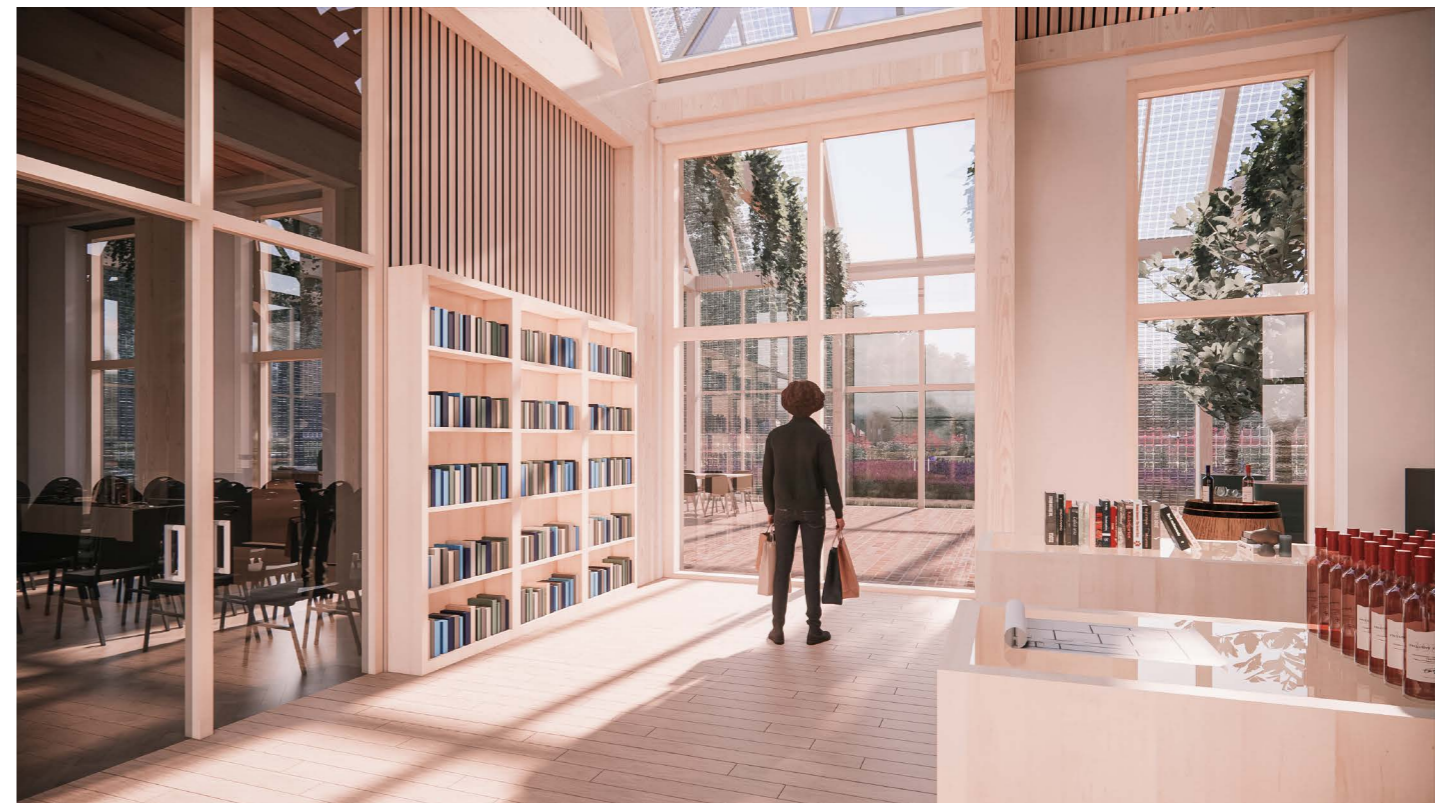




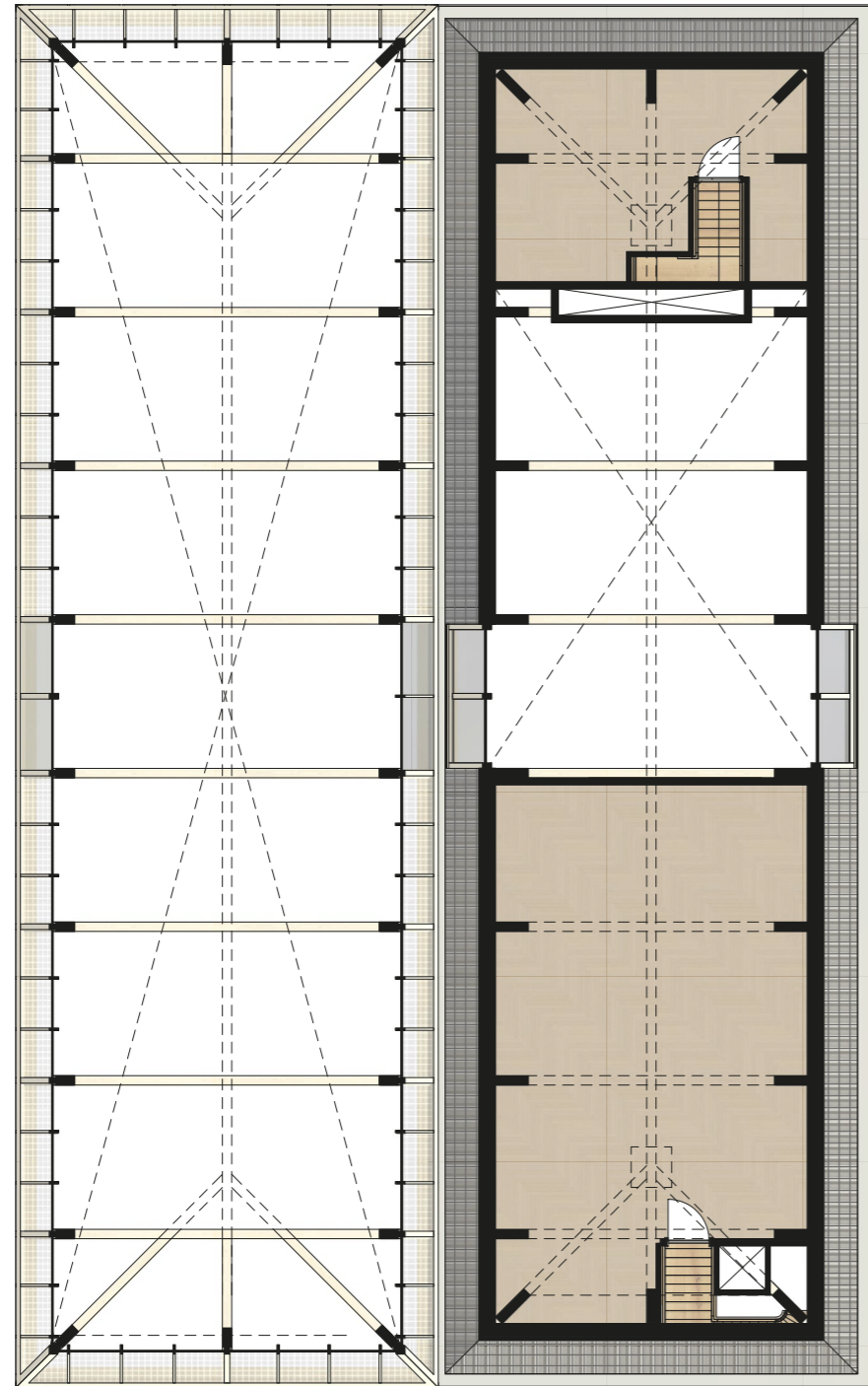
GROUND FLOOR NEW BUILDING



Shop



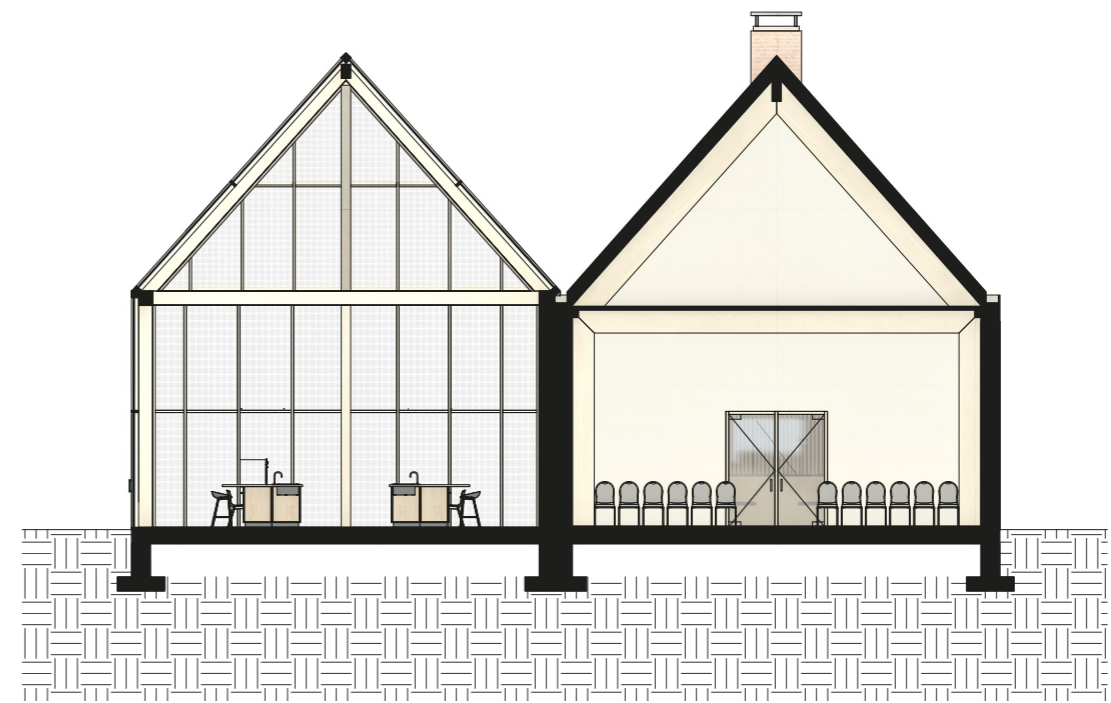
Shop



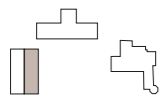
FIRST FLOOR NEW BUILDING



LONGITUDINAL SECTION

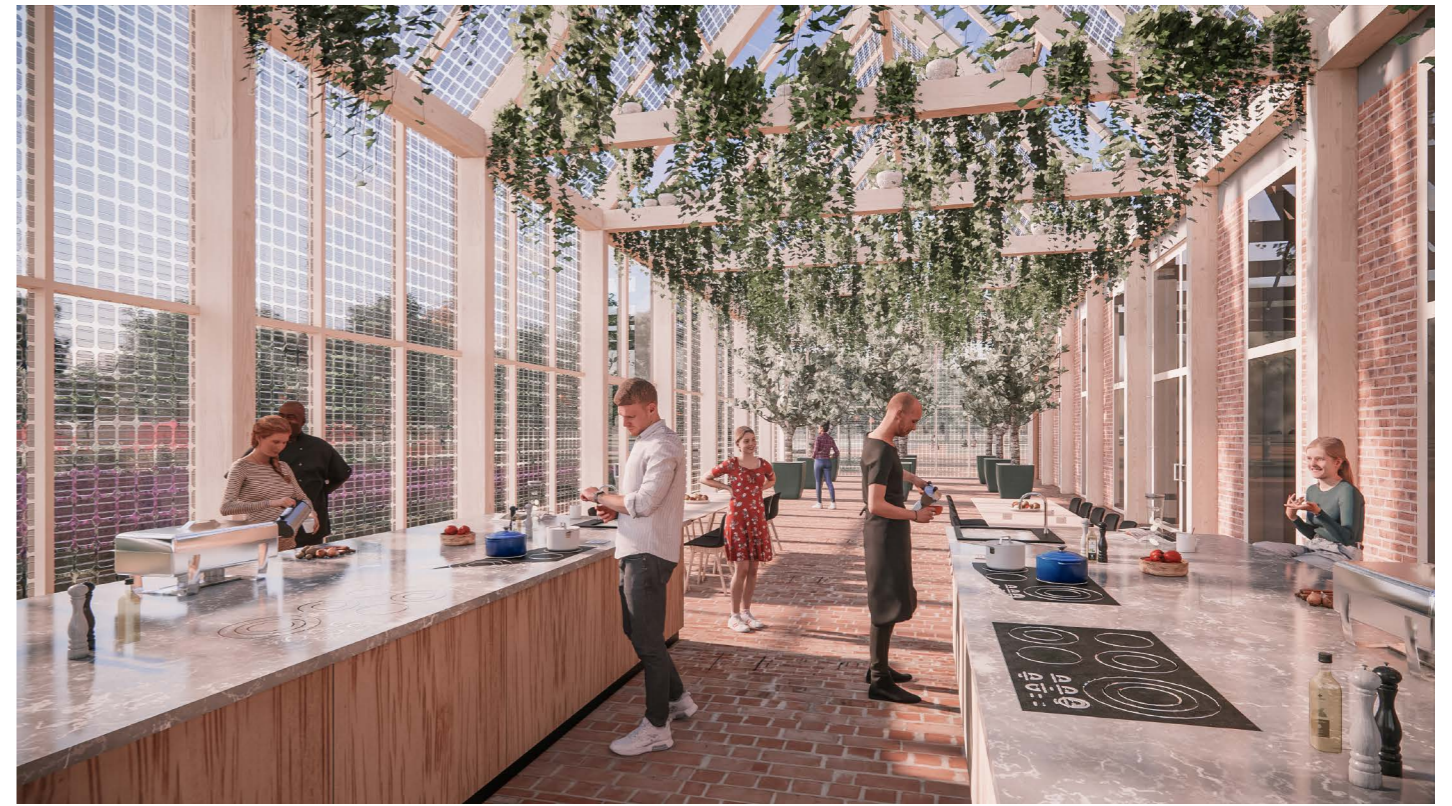


CROSS SECTION





Flower garden



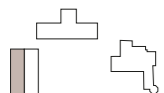
Orangery



Vegetable garden



Orangery



REFLECTION

How can fourteenth-century **havezaten** from Het Kwartier van Zutphen be characterized to formulate a **building typology** and how can this be made **experienceable** to the public in the re-design of **Huis 't Velde**?



THANKS FOR YOUR ATTENTION



Archives and databases

Archieven.nl. <https://www.archieven.nl/nl/>

Collectie Gelderland. <https://www.collectiegelderland.nl/>

Collectie Nederland. <https://data.collectienederland.nl/>

Erfgoed Gelderland. <https://mijngelderland.nl/>

Erfgoedcentrum Zutphen. <https://erfgoedcentrumzutphen.nl/>

Gelderland in beeld. <https://www.gelderlandinbeeld.nl/>

Gelders Archief. <https://www.geldersarchief.nl/>

Geldersch Landschap & Kasteelen (GLK). <https://www.glk.nl/>

Het Geheugen. <https://geheugen.delpher.nl/nl>

Monumenten.nl. <https://www.monumenten.nl/>

Nederlandse Kastelen Stichting. <https://www.kastelen.nl/>

Rijksdienst voor het Cultureel Erfgoed (RCE). <https://beeldbank.cultureelerfgoed.nl/>

Rijksmonumenten.nl. <https://rijksmonumenten.nl/>

RKD - Nederlands Instituut voor Kunstgeschiedenis. <https://rkd.nl/nl/>

Stichting Kastelen Buitenplaatsen Landgoederen (skBL). <https://www.skbl.nl/>

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Harenberg, J. (2001). De havezate 't Velde bij Warnsveld. Alphen aan den Rijn: Canaletto/Repro Holland.

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